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HIGH SCHOOL DEPARTMENT OF STATE EDUCATIONAL ASSOCIATION.

PROCEEDINGS OF FIFTH ANNUAL MEETING AT HARRISBURG.

THE Fifth Annual Convention of the High School Department of the Pennsylvania Educational Association met in Harrisburg, December 28, 29, 30, 1909. The caucus room of the House of Representatives had been secured for the sessions of the convention, and was well filled at every session, the enrollment being two hundred and twenty, the largest in its history.

The papers offered were of a high standard and were heard with marked attention. The discussions showed the interest of the members in the subjects presented.

The convention met on Tuesday evening at eight o'clock, after a half-hour spent in enrollment and interchange of greetings, Vice-president Chas. S. Davis, of Steelton, in the chair. The first paper was presented by Principal J. Linwood Eisenberg, of Royersford, who spoke as follows on the subject, "How Can the High School Serve and Reach the Entire Public?"

HIGH SCHOOL TO SERVE ENTIRE PUBLIC.

In considering this subject there are four words I wish you to notice, "high school," "reach," "serve" and "entire public." The "high school" needs no definition, the State Department has already determined it with its different grades. "Reach" and "serve" will serve as an outline for the paper. The "entire public" needs a definition. By it we mean all the children of a given school district who are of proper age to be doing high school work, that is, fourteen to eighteen. With this understanding of the subject let us proceed to consider the question at issue.

First: How can the high school reach the entire public? In the first place it is necessary to create a healthy school sentiment. The growth of high schools during the last decade, both in number and in attendance has been most remarkable. This itself will show that the sentiment is being created, but with this phenomenal growth in high schools we notice that the high school has been largely selective. It has not reached the entire public. It is in this class, in which the high school has not reached the public, that we need to create the school sentiment. There has not existed a proper unity of purpose between the home and school. The home has not understood the school, nor has the school understood the home. By these two institutions coming in closer contact with each other and creating a better mutual understanding the school sentiment can be created. The average home needs to realize that what was good enough for the father or mother in an educational way is not good enough for the son or daughter in the present change of conditions. The home and the child need to realize that an education means a larger earning capacity, a greater power of enjoyment, and above all the increased power to serve the community. This ideal, closer unity between home and school, can be brought about by the parents' meeting, by special visiting days in the school, and by teachers visiting in the homes.

In the second place the high school can reach the entire public by reducing the expenses of graduation. The high school, until the present time has been largely a selective school and has created in itself certain social standards. A standard with respect to expenses that many homes in the community cannot bear. It is a frequent

excuse of the parents that they cannot "afford" to send their boy or girl to the high school because of expense. This is too often true. It should be the province of the school authorities to at least control the expense of social functions, and reduce the expense to a minimum. It seems to me that there should be practically no outlay of money for a young man or woman to graduate at a public high school. A new suit of clothes or a new dress together with a few incidentals should be all that is necessary. In the present day large amounts are spent for invitations, banquets, and commencement expenses. In saying this I do not wish to be understood as urging that high schools should not give social education. That is altogether a different question and it certainly will be one of the means of reaching the entire public by giving to the public the social recreation and the social education that young men and women need. But this can be given and better given by limiting expenses in these social functions.

Again the high school can reach the entire public by beginning some branches and methods of instruction earlier in the course, in this way the continuity of the grammar school with the high school will be maintained. As the present course is arranged the end of the grammar school is a quite likely place for the boy or girl to drop out of school. By bridging this gap between the grammar school and the high school a much larger percentage of the public will be reached.

In the fourth place, it seems to me, and this is especially important, that the high school can reach the "entire public" by a system of promotion by branches. It is unfortunately true that so few of the pupils who enter the high school complete its course. One of the most common reasons for dropping out of school is the method of promotion. There is no reason why pupils failing in arithmetic or algebra in the first year in the high school, should be required to "review" for another year his first year Latin or history. The ideal condition would be the system in which the child is promoted by branches. Let him take again the second year only those branches in which he has failed. A system of promotion of this kind will make us more work as school officers but it will be work that is "worth while" in saving a boy or girl to complete his or her high school course. It may mean the finding of a great man or woman for the state. So let us universally establish the system of *promotion by branches,* in our high schools.

The second division of the subject is "How can the high school serve the entire public?"

In the first place I should like to say that the high school can reach the entire public by giving better service. With the tapping of different social classes for pupils, the high school authorities need to make the high school course "worth while." This will mean a wider range of subjects from which to select; it will mean a course of study adapted to the needs of the child; a course of study adapted to the changing conditions of the adolescent. The course of study should be so arranged that it will best prepare for social efficiency. Relatively, it is the few who go to college. Hence the course should prepare to go out into life and to do well whatever the hands find to do. Such a course of study will be one that considers the child and not "the system." With careful consideration by parents, teacher, and child such a course may be selected that will best serve the needs of any particular case.

In the second place the high school can serve the "entire public" by securing better trained teachers, teachers who can teach boys and girls as well as geometry or Latin, teachers who are students of human nature as well as students of the branches which they teach, and teachers who are teaching not only for the money which they can earn but because they have chosen teaching as their profession and because they are eager to give the greatest possible power to the boys and girls. This will mean better trained teachers than we have at present. It will mean the establishment of a "school of education" to prepare high school teachers. The normal school prepares effectively elementary school teachers, the college from which most of our high school teachers come, makes comparatively little effort to train men and women in teaching. So we need schools established for such preparation of high school teachers.

Again better service can be given to the public by having a complete system of departmental teaching, that each teacher may be a specialist in his branch. Let him be thoroughly in love with the subject-matter of his branch and let him know human nature, and better service will be rendered to the public by our high schools.

Again, we can better serve the public by having clearly in mind the end of education. Let us, as teachers and principals of high schools, have clearly in mind what is the end of education and having this aim in view, so determine our course of study, so select our teachers and so advise our pupils that our high schools shall work to

the end of social efficiency of the boys and girls.

Mr. Ronald P. Gleason, of Scranton, continued the discussion of the topic as follows:

HIGH SCHOOL SERVICE TO THE PUBLIC.

I remember reading in an old Boston school report how in 1635 a Latin school was established in that city. This school prepared boys for college, and from there they went out to follow the professions of divinity, the law and medicine. In 1821, or nearly two hundred years later, the English high school was established. This fitted the young men mostly for mercantile life. It was fully two hundred and fifty years after the elementary training of the embryo ministers, lawyers, and doctors was taken care of by the public, that a movement was started and a high school was opened to look after the welfare of the great majority, those who were to enter into the great industrial life of the nation.

Thus it will be seen that it is only within a generation that a real effort has been made to open real public high schools. It has even been a shorter time than this that the girls have been considered at all.

It was thought by many that manual training was to be the cure-all for every educational ill, but this belief was not well-founded. There are children who seem to be utterly unfitted to do any kind of manual work, and for these and for those who still desire to follow the professions of the ministry, the law, or medicine, certainly the classical and English high schools have their place. The manual training and the commercial high schools have their place too, and there is still another, the vocational school, which is being earnestly discussed and is in the experimental stage in a number of places at the present time.

As the public schools are intended to cater to the public needs there should certainly be a good choice in courses, but it does not seem wise to have too much elective work in a course. For the average child of fourteen or fifteen is not able to choose electives intelligently, and in most cases it would be the child and not the parent who would choose.

A great proportion of the boys and girls who reach the high school never enter it. This is due to a variety of causes. The necessity of becoming wage earners, and "tired of school" are the leading reasons perhaps. Parents do not have the control over their children that they should, and boys and girls often drop out of school for some fancied reason or discouragement only to regret it in a short time, but pride will not allow them to acknowledge this error until it is too late.

High schools should not only give boys and girls as broad an education as possible, but it should also fit for the duties of life. Most cities now have schools where stenography, typewriting, and bookkeeping are taught, whereby young men and women may upon graduation enter into the business world and earn fairly good salaries at the very start. The manual training school should give enough systematic training in the mechanic arts to enable a boy to enter the industrial life of the country with a well-grounded knowledge of the principles underlying the mechanical trades. The girls should be trained to become home-makers, while at the same time they acquire a good academic education.

In our Technical High School at Scranton we have four-year courses in commercial and manual training work. It is our aim to give a good education in academic subjects. In the commercial course, this includes languages, both English and French, or German, mathematics, history, and science, so that when our graduates go into offices where industrial operations are carried on, the terms and language used will not be meaningless sounds. In the manual training course for boys two periods a day are devoted to shop-work, one to drawing, and three to academic subjects. A year and a half is devoted to woodworking, both at the bench and lathe; and two years and a half are given to work in iron and steel. In drawing, the pupils have both freehand and mechanical, more time being given to freehand during the first two years than the last two.

The idea underlying the girls' manual training course is to fit them to become home-makers. One-half of their time is devoted to academic subjects and one-half to manual training. They learn to cook plain and fancy foods, to prepare food properly for invalids and infants, to set a table and to serve; to do laundry work and make up beds. Especial care is used in teaching them the use of the cheaper cuts of meat in making palatable dishes. They are taught to use both the coal and gas ranges and are encouraged, and they also do, a great deal in practical cooking at home for the family. Plain and machine sewing are taught, dressmaking and millinery. They are also taught embroidery, basketry, brass and leather work and in all this the drawing work plays an important part, as far as possible being correlated, the designs being made in the drawing room and then worked out later in the form of baskets, mats, stencil work and many other useful things.

In reply to questions Professor Gleason said that their high schools are open four evenings per week. The majority of the teachers teach also during the day. A deposit of $1 is required at the beginning of the term, forfeitable if attendance averages less than 75 per cent. About 600 pupils are enrolled. The Scranton Correspondence Schools stand for continuation schools for the general public—working people who want to improve themselves.

State Supt. Schaeffer: The introduction of vocational training into the high schools will solve the problem of those schools serving the public. I have an annoying problem to solve on this line. Three weeks ago at the Stevens Industrial School in Lancaster, of all the applicants for admission, one wished to become a carpenter; three bricklayers, and all of the rest electrical engineers. I heard recently from Milwaukee that only one-fourth of the high school pupils remain two years. I want light on the organization of vocational schools so that pupils will remain three or four years.

The practical difficulty is to make the high school serve the whole community. The average boy has no chance to enter the Williamson School. Students are chosen by competitive examination. A recent letter from Lewisburg asked me to name a vocational school for a boy with one leg and crutches. I want to see the Stevens School, which received $40,000 from the State, made of use to the average boy.

Dr. A. D. Yocum thought that we are on the wrong track in trying to prepare for every phase of human life. He believes in vocational schools, but not in the sense in which some enthusiasts urge them.

Mr. Breidinger said that in his school manual training is an optional branch, because lack of accommodations renders it impossible to offer it to all pupils. This is a mistake. If it is good for one it is good for all. Pupils of fourteen years of age are not competent to elect wisely what they shall study. Manual training should begin in the lower grades with work suited to the age of the pupils. It should be given to all, and not restricted to experts. We ought to discover the bent of each pupil and then develop their ability on that line.

Dr. Schaeffer: Does your manual training lead to the trades?

Answer: No.

Dr. Schaeffer: Does a larger percentage of your manual training pupils go into the trades than of other pupils?

Answer: Yes.

Dr. Schaeffer said that this is not true of Philadelphia.

Member: I question whether we have yet grasped what our social life means. We have let the individual say what he will do, whether it was wise or not. If we look at the question from the side of the community we must recast our ideas on the subject, and try to prevent blunders and a waste of young life. Why not combine our cities and surrounding boroughs in this particular, so that if a few young people want a special line of work they can have it. The question is not one of industrial education but of meeting the needs of the community.

HISTORY COURSES IN HIGH SCHOOLS.

The opening paper was by Principal Sarah M. Gallaher, of Ebensburg, on "The Proper Adjustment of History Courses in the High Schools so as to Articulate Closely with the Elementary School and Meet College Requirements." It was as follows:

I. *College Requirements.*—At the meeting of the American Historical Association in Providence, R. I., December 26–29, 1906, the report of the "Conference on history in the college curriculum," concerned itself principally with "the sequence of courses." From this report are gleaned these facts relative to the first year, and in a very few instances the second year, in history in several colleges and universities.

At Stanford all the first year courses are elective, and cover in a general way the various fields of history, ancient, medieval, modern, English and American. Students are advised to take one or possibly two of these introductory courses, and, in general, experience has demonstrated that English and medieval are the best subjects for the first year.

At Yale the first year offers but one course in history, and that elective, beginning with the Fall of Rome and going on to 1870, covering western continental Europe. This is followed by a sophomore course, also elective, open only to those who were taking history in the first year, and covering the whole period of English history.

From Smith College comes the opinion that it is better to exclude a student from a given course because of immaturity rather than to exclude him because he has not had certain other courses which would make an excellent introduction.

At Wisconsin College the history major consists of twenty-six hours, and a bachelor thesis, and each student must take one introductory course in European history and one in American history. The student must take at least ten hours of advanced work and may take as high as sixteen. In the freshman year three courses are open: Medieval, English and Ancient.

At Cornell the freshmen have a choice between ancient history and English history. The sophomores take medieval history.

At Williams College no provision seems to be made for the first year. In the second year during the first semester the students are carried to the fifteenth century; during

the second semester they go to the Treaty of Utrecht, including not merely the history of Western Europe, but also English history, politically speaking, and American colonial history.

At Dartmouth the first course offered is European history, 375 A. D. to 1789. At Minnesota every student that goes into any department of American history must have taken a course in English history. At Pennsylvania two hours of history per week are absolutely required which may be selected out of any one of five courses.

II. *Entrance Requirements.*—The four subjects in history required by the College Entrance Examining Board are ancient history, medieval and modern European history, English history, American history and civil government. "Each of these topics is intended to represent one year of historical work, wherein the study is given five times per week; or two years of historical work, wherein the study is given three times per week.

"The examination in history will be so framed as to require comparison and the use of judgment on the pupils' part, rather than the mere use of memory. The examinations will presuppose the use of good text-books, collateral reading, and practice in written work. Geographical knowledge will be tested by requiring the location of places and movements on an outline map."

Most colleges probably require two of these four subjects.

III. *The Elementary School.*—As the first step in a preparation for the foregoing requirements, most schools have arranged for two years of American history in the grades. Supplementary to this again is a small amount of foreign history, English, Grecian, Roman, French, German, Spanish, Japanese, ancient, medieval, or modern, determined largely by accident in relation to reading and geography. In some places a year of English history has been added to this schedule. In the absence of data it is impossible to cope with the difficulties and discrepancies in this elementary matter. That there should be grade work in American history, no one will doubt. Upon the question of quantity there will be many disagreements. According to the enlightenment of Pennsylvania at the present day, practical service, culture, and college preparation can not be differentiated, and practical ideals are likely to prevail. In the advanced thought developed in the discussion of history in the elementary schools, it has been intimated that we are in need of new suggestions for teachers, new text-books, and quite possibly new teachers. So far as my personal knowledge goes, the great majority of grade teachers will require a much more extensive training in history before they can manage such a course as that outlined by Professor James A. James and his colleagues. With competent supervision from the principal or the head of the department of history in the high school, or some other competent person, and the most unselfish co-operation among grade teachers, much might be accomplished in any given school.

That we may refresh our memories on this report, let me enumerate the topics of the Sixth Grade.

1. Where Americans came from. (a) Newcomers. (b) How emigrants come. (c) Earlier Americans as emigrants.
2. When America was unknown; three views of the world. (a) How the world looked when the Christian era began. (b) How the world looked just before Columbus discovered America.
3. What Americans started with, a study of some ancient inventions. (a) Some recent inventions. (b) Inventions made before Columbus discovered America. (c) Still older inventions.
4. The Greeks, why we remember them. (a) Famous stories already learned through supplementary reading. (b) Famous Greek cities which still exist. (c) Unforgotten memories of Greek courage.
5. How the Greeks lived.
6. Greek boys and Greek men.
7. Men who carried Greek ways of living to other lands.
8. How the Romans began.
9. How the Romans conquered the lands about the Mediterranean.
10. The Roman in the West.
11. Rome, the imperial city.
12. Rome and Christianity.
13. The Germans.
14. How the Germans came to rule over the West—Charlemagne.
15. Alfred and the English.
16. How the English began to win their liberties.
17. How people lived in England and in Europe during the Middle Ages.
18. The Church in the Middle Ages. Pictures of great cathedrals.
19. The Crusades.
20. The results of the crusades—growth of trade and love of travel.
21. Beginning of discovery.
22. Columbus.
23. The successors of Columbus.
24. Other successors of Columbus.
25. Beginning of conquest.
26. England in the days of Elizabeth.
27. France, another rival of Spain.
28. The King of Spain attacked by his subjects, the Dutch.
29. Englishmen join in the fight against Spain.
30. English voyagers westward.

The Seventh and Eighth Grades deal almost exclusively with American history. While such a course has much to be commended, yet from the point of view of personal experience, I think that it is too elaborate for the amount of time available in one year's schedule. From such a course, however, as a guide, many features may be selected the teaching of which would have a decided effect, practical, cultural, and economical, upon the work of the high school. With even a small list, not seized upon at random, but carefully selected and really taught, the elementary pupil will understand his American history better, and will pass into the high school prepared to take up intelligently a simple connected history of some part of the world.

IV. *The High School.*—With our equipment of elementary history as a beginning, whether it is American alone or whether it includes American plus a small amount of clearly comprehended earlier history, and with the possibilities of the first year in college at the end, the scope of high school history becomes somewhat limited, and may well begin with a course in English history. This should be required in the first year (of high school), and should cover as many hours as the proper adjustment of work will allow. Such a course can be made simple enough to adapt it to the immaturity of pupils, is most closely related to American history, and is needed as a correlative of the English classics of this year and the succeeding years.

The second year of the high school should be given by preference to Roman and Grecian history or to Grecian and Roman history according to the adjustment of the ancient language courses, and may also be required.

The third year may be given to medieval and modern European history, required or elective according to circumstances; and the last year to American history required.

"I just teach all the history I can without any thought of articulation."

Following Miss Gallaher Principal B. S. Graham, of Greensburg, read a paper on the same subject, written by Principal S. E. Downs, of Brookville:

HISTORY COURSE IN HIGH SCHOOL.

The aim in teaching history is primarily good citizenship. Good character insures a life devoted to the best interests of the community. Those who are interested in the welfare of others are, to the extent of that interest, patriotic. The boy who becomes truly patriotic will be a man of good character and a citizen rich in virtues. The aim of the teacher, both in the elementary school and in the high school, should be to make true men and women; those whose lives shall be stainless and who shall deem it their greatest honor to make and keep our flag free from pollution. The future welfare and even existence of our republic depends upon the character of the people, and the public school must assume the chief burden of instilling a reverence for religion, liberty and law, into the minds of those who must early assume the duties and responsibilities which citizenship implies.

Until the elementary schools use a reasonably uniform course and the entrance requirements of colleges become less varied, it is obvious that no definite course can be suggested which will articulate closely with more than one elementary school and one, or a small group, of colleges. Elementary schools with short terms can scarcely hope to prepare pupils for high school history as can those which have long terms and every convenience and the best of instructors. In all schools much work in mythology, biography and historical stories should be done in the intermediate grades. In Pennsylvania the vast majority of pupils never reach the high school, and this is particularly true of the foreign population who need the greatest drill on the principles of government. I make a plea for those who will become the great army swayed by the politician, and dominated by the mob spirit unless they, in the seventh and eighth grades of our schools, develop a love of country; a love of all that is beautiful in the lives of those worthy of veneration; an abhorrence of treason and political corruption; and an unchanging determination to wield the powers of citizenship for the greatest good of the greatest number. A knowledge of forces which have dominated our political institutions can here be given and enforced by examples from many nations. But we do not have the time and many grammar school teachers are not equipped to reach far beyond United States history and civics in history work of this department.

It is the experience of many high school teachers that the children enter that department very deficient in history. In order that such pupils may secure a review of work which has not been completed; that the many who leave the high school in the first year (more than in all other years combined) may receive in the briefest possible time valuable practical training; that the transition from the grammar school may be less marked through the introduction of new subjects; that the unity of the work in history may be retained; and that the many who will never remain to complete the course shall receive from a skilled high school teacher valuable lessons drawn from our own experiences as a nation, we believe it wise to devote the freshman year to a topical review of American history and civil government. Many valuable lessons may here be emphasized by illustrations from the world's history.

Consecutive work in history has been largely nullified in the high schools through the elective system. Few high schools require four full years in this work and the pupil elects the years which appeal to him most or make possible the securing of other desired work.

After devoting one year to the study of the development of the government of some European nation, could our pupils not most profitably devote the remaining years to a comprehensive study of the great questions which are bound to confront them as citizens and possibly as officers of govern-

ment? In this study, each year of which would be a distinct unit, Greece and Rome would prove rich mines of information and the historical knowledge thus gained would be of much practical value. Habits of research would be established and a more general knowledge of the world's history would be obtained than can possibly be secured through a hasty study of a few nations. Possibly no books have been written suitable for this kind of historical study; but few have been written which, if followed closely, aid materially in gaining more than an accumulation of isolated historical facts.

Is it possible to cover the vast field of American, English, French, Mediæval and Ancient history, retain its unity, and at the same time give to the pupils such high ideals of personal and political life and opportunity as will fit them for true manhood and the direction of the great forces which are determining our political destiny?

But these suggestions do not solve or attempt to solve the problem of meeting College Entrance Requirements. At best the ordinary entrance examination but determines the pupil's knowledge of a vast array of facts and may be the result of diligent cramming. Should the colleges be permitted to deprive the many of the best training for life that the few may articulate properly with work which will only be of great value if completed in the college? High schools desire and patrons demand that their school shall have certificate privileges from the higher institutions; but should the value of the teaching for the many be largely nullified that a few may secure such credentials? Schools supported by public taxation should certainly not use their opportunity merely to develop students to meet the demands of independent chartered institutions. Training which prepares boys and girls to take up the ordinary duties of life with intelligence will soon be recognized by the colleges as suited to the needs of Freshman pupils.

If, as many maintain, the public school is the chief bulwark of free American institutions; surely such teaching as will fit our boys and girls to meet with intelligence the grave problems of this generation, must demand a fair share of time and effort.

Question: If we should close our eyes to the demands of the colleges, would we not think it wise to have a four-years course?

Miss Gallaher: No. A four-years course in any one subject is too much.

Question: The American Historical Association advises a four-years course, and our State Department endorses their suggestion.

Miss Gallaher: Local conditions must determine. Entrance requirements differ. The pupils' ability is not the same. It is not wise to crowd one subject for another. History is important, but we must think of other subjects. It is impossible to decide the matter off-hand.

Supt. Davis: Miss Gallaher has given the best answer possible under the circumstances. I am interested in teaching history, having taught it while in high school work; but there are other things required of the high school. The best course is to offer a four-years course and require two or three years' work. College preparatory students may wish to choose other subjects rather than history in the later years and should have some privilege of election. We require two years but allow four. American history is too much neglected in the high school. That and civics might profitably be required in the senior year.

SCOPE OF SMALL HIGH SCHOOL.

"The Legitimate Scope of the Small High School in Relation to the Normal School," was the next topic announced for discussion by Prof. H. B. Davis, of the State Normal School, California, who spoke of the present conflict between normal and high school courses, and the fact that at the present time high school graduates are often compelled to go through tiresome reviews of subjects already completed, when they enter the normal schools. He drew a sharp line of distinction between the functions of the two schools, urging that the high schools do all the academic work, leaving to the normal schools only the professional training of teachers. He criticised city training schools for teachers on the same ground as normal schools are now criticised, because they do little more than give additional academic training to their pupils, with little strictly professional work, and urged that principals ought to send their best pupils to normal schools for professional training.

It may be asked, Of what advantage is the training of the normal schools to high school graduates in cities where there are training schools? To this question the normal school may rejoin, Are you sure that an extra year of academic work is the equivalent of what should be given in a professional school by professional teachers?

High school pupils should review their branches in the normal schools because the point of view of normal and high schools is essentially different. When the normal and high school people get together, the

high schools will do all the academic work, as a background for later professional training in the normal schools. That is fair to both. As a matter of fairness, the high schools should send their good pupils to the normal schools for professional preparation for teaching. Under these conditions the normal schools should require two years residence for graduation. As to the review of high school branches in the normal school, some have thought it to be indispensable, as a student's attitude toward a given study is vitally different while mastering the subject-matter from his attitude when considering its presentation to others. There could be no close relationship between the two and three year high schools and the normal schools, but only with high schools of the first grade.

Principal F. W. Wright, of Uniontown, read the following paper:

SMALL HIGH SCHOOL AND NORMAL SCHOOL.

The discussion of this question by Dr. Davis has made a firm impression upon my mind that the question is a vital one and well worthy the intention of normal and high school authorities. We are fortunate in having it so well presented. My work is found within speaking and hearing distance of that of Dr. Davis and I can say from positive knowledge that the work of the Southwestern State Normal School passes at full par value in our part of the state.

As one engaged in high school work I must look at the question from the other point of view, that of the high school. These views are not and should not be antagonistic. The normal school and the high school have a natural relationship as the schools for the training of the masses in higher educational work. They are the democratic elements in our educational system. The college and the university must get their students from those able to bear the expense. The normal school and the high school are able to hold out the possibilities of higher education to all. But the normal school and the high school should do, by complete co-operation for elementary education, what the college and the university are now doing by complete co-operation for higher education—I mean the training of teachers. It is the consensus of opinion in both the normal and the high school that this co-operation does not now exist.

In order to arrive at some definite idea as to the extent to which the school not maintaining a normal department is co-operating with the normal school in the matter of sending and receiving students, I addressed a letter of inquiry to five such schools in widely scattered sections in the western half of the state. I have here the result of my inquiry: 173 students were graduated last year; 15 entered the normal school; 20 began teaching; 61 entered college. Fifty-five per cent. of the graduates went further in specifically educational work, but the normal school got only 9 per cent., the teaching profession got 12 per cent., and the college got 35 per cent. This would seem to indicate that the normal school and the high school have come to no such working basis as the high school has in common with the college. I think we can agree that such is the case.

I do not believe that these 20 high school graduates were teachers in all that the word implies any more than I believe that they were surgeons, nurses, or lawyers. They needed just as careful professional training as those who enter these professions. You say the normal school is open for them. But let us see on what conditions.

Here we have twenty young men and women, graduates of high schools with diplomas that admit them to all of the colleges and many of the universities without examination. They have done four years of academic work that has fitted them to teach the work of the elementary school in a manner that should be an inspiration to the learner. Their knowledge of the advanced work will make their teaching of the correlated common branches much superior to that of those who begin teaching as soon as they are able to secure a certificate, and either do not go farther or else satisfy themselves with a spring term or two at the normal school or elsewhere. The normal school is the only place where they could have secured this needed training after high school graduation. But let us see the manner of entrance.

I have it from one of the leading normal school men in the state that at least sixty per cent. of their students enter from the grammar, or the ungraded rural school. These students complete their normal course in three years. Their classmates entered the high school and were graduated a year later with a diploma that Vassar, Michigan, Washington and Jefferson and many others accept, yet they must go to the normal school and spend two years more in securing the same certification that their classmates got in just one-half the time. I am aware that the claim is made that they must spend this time in getting the needed professional work. Granted that this is true, then it becomes difficult to see how the normal graduate has secured this professional work and the needed academic work in half the time. If three years are enough for the normal course without high school training then two years are too many with this training. Time has been lost, work has been duplicated. This is in direct contradiction to one of the most reasonable and most insistent demands upon our educational system—that demand for greater economy in time. The high school course must be kept at four years, and there are those who would lengthen it. If this is true then the high school is obliged to sacrifice its great opportunity as a preparing school for professional work for teachers, or else provide a normal department of its own. I do not believe that the high school should duplicate the work of the normal school any more than I believe that the normal school should ask that the academic work of the high school be duplicated. But I do believe that this apparent

loss of time should be remedied. Let the normal school give a strictly professional course of two years leading to the degree of bachelor of pedagogy and throw it open to high school graduates of first grade schools, or to those having the equivalent and I venture the assertion that more students will go from the high school to the normal school.

High schools attempt reviews of the common branches in the senior year, but these reviews can do little else than prepare for examination. What the high school graduate, preparing to teach, needs is a thorough review, a professional review of these branches. There is much of pedagogy in arithmetic that the high school has neither time nor facilities to point out. The high school is not a professional school. It must train the masses for the work of the shop, field, and home.

The question might here be raised as to the matter of all the normal schools of the state demanding high school diplomas for entrance, and thus becoming strictly professional schools. The step would doubtless be too radical at present. Other states are moving gradually in that direction. Milwaukee has a high-grade normal school in addition to the others in the state in which this is the requirement. Ohio gives state aid to two normal colleges where the same is true. Illinois provides a special course of two years for graduates of the first of her two groups of accredited high schools, and a similar course of a year longer for those from the second group. If we are not ready in Pennsylvania to make this step, may we not have a working agreement that the high school do the academic work and send to the normal school a recommended body of students for professional training? This can be done by means of the so-called general course in high schools. This course is planned for the student not going to college. High school principals usually know the possibilities of their students as teachers, and they usually know the names of those expecting to teach very early in their course. They can then see that these students shape their course through electives in the direction of this future professional training. There could thus be sent to the normal school each year a select body of students who would in two years be a power in the elementary schools of this state.

Academic and professional work are supplementary in the training of a teacher. A teacher must know, and she must know how. But both cannot be obtained at the same time and the fullest measure of benefit be derived. Let the normal school supplement the academic work if the high school has already given this to the student. Let the high school be sure that the academic work is well done. Then let the student enter a graduate course that leads to a higher degree than that of bachelor of elements. The high school and the normal school are sufficiently different that neither can do the work of both. They should endeavor to be supplemental and not identical.

There is no question that the great demand of the educational world today is for more and better trained teachers. The normal school is striving to meet this demand. The thirteen schools in as many districts have trained thousands for better work in the school-room. No brief need be held here tonight for the normal schools. We find them in every state in the Union. They have the pragmatic sanction that the test of a truth is its application. But the normal school and the high school are not alive each to the reciprocal relation of the other. We feel that better times are coming.

It was formerly necessary for the normal school to receive persons of meager education and then face the dilemma of trying to add professional training to a foundation that could not support it, or else proceed to give such instruction in the common and higher branches as might be essential. This is no longer necessary. High schools are established in every town and borough and in many townships in the state. By means of efficient state inspection these schools are being standardized and classified. The normal school needs to be in the rôle of a high school no longer, nor need she be longer in the dark as to this or that high school. These conditions should go far in solving this question.

To return for a moment to the statistics used at the opening of my remarks, we find that of the 173 graduates but thirty-five, or twenty per cent., entered the teaching profession. A state superintendent in a neighboring state said recently, that twenty per cent. of the teachers entering the school-room that year had absolutely no professional training, and that a large percentage of these had not even a high school education. Here then lies a distinctive field of opportunity for the high school and the normal school. Let them join hands and remove this condition, for, I suppose, an approximate situation exists in our own and many states. We have 264 normal schools and more than 8,000 high schools in the United States. Let them join hands and do as great work for elementary and even secondary education. The average professional life of the teacher is five years, and with this closer co-operation between the normal and the high school it will not be necessary for so many of these teachers to get their professional training at the expense of the school they are learning to teach. By the time this training is secured, if it is ever secured, the school is turned over to another apprentice.

We know what Shakespeare said concerning doing and "knowing what were good to do." I am convinced, however, that the capable commission for the revision of the normal school course, and the agitation on this question by normal and high school authorities will bring about a solution to what we now recognize as an educational problem.

Thus it will be seen that they are taught to cover themselves from top to toe with the exception of shoes and stockings, to cook for the sick and the well, to take care of the dining room and bed room in the proper manner, to keep their clothing clean and to design and make things which

will be useful and ornamental in the home. This in connection with their academic studies and bookkeeping, that they may keep their own accounts in a systematic manner and also know something of business forms, certainly should fit them to become good keepers of, and helpers in the home.

Mrs. Ellen H. Richards speaking of the relation of the school and home, says: "The practical outcome of these beliefs will be that no girl is given a diploma until she can buy material for a day's food at a given price, can prepare that food appetizingly, clear away and dispose of it in a sanitary manner; until she can buy the material and make a dress, trim a hat and do up her aprons and collars; until she can clean a room and air it and make a bed properly; until she understands the essentials of sanitation. These simple elementary principles of safe, daily living, the state has a right to demand of its citizens and at present the public school is the court of judgment as to fitness of citizenship.

This is the age of the specialist, hence we must not confine ourselves to the purely cultural in the high school. This has been too long its only aim. Culture has become a fetish, until as it is said in the region about some of our eastern colleges "the three great virtues are faith, hope, and culture, and the greatest of these is culture."

WEDNESDAY MORNING.

THE devotional exercises were dispensed with, owing to the absence of the gentleman who was to conduct them, and the Department proceeded at once to the consideration of the morning programme.

CHANGES IN TEACHING MATHEMATICS.

"Needed Changes in the Teaching of Mathematics in the High School, to Meet the Demands of the Industrial School." was the first subject of the morning. This topic was discussed by Prof. John T. Morris, of the Department of Mathematics, Carnegie Schools, and Principal D. Howard Robbins, of Phœnixville. Prof. Morris read the following paper:

"Have you received the last report of the Commissioner of Education?" was asked me recently. And it was added, "Everything is Industrial Education." Although my friend's statement is not literally true, all will concede that the movement for industrial education is extensive, is growing larger, and is affecting the entire educational organism. Hence the industrial school possesses certain claims upon the course in mathematics of the high school.

Let us first, however, consider some of the hindrances to change which must be removed. One difficulty to be overcome is to change the opinion that mathematics is a medium for drill purposes only; that arithmetic, algebra, etc., are the whetstones of the mind—cold, lifeless dumb-bells, the necessary equipment of the mental gymnasium. This theory is doubtless responsible for the order and content of ninety per cent. of our present text-books. For what other theory would justify the long lists of problems in algebra under complex fractions, least common multiple, or multiplied complex examples in surds.

Back of the drill idea is what Dr. De Garmo calls an antiquated psychology, the so-called "faculty psychology." We are coming to believe that mental powers are exceedingly specific, that there is no such thing as a generalized habit, that in place of memory there are memories, in place of perception there are perceptions. Our experience bears testimony that neatness in the writing of English grammar exercises does not result in neatness in the writing of arithmetic papers. Recently I have been greatly impressed by a certain observation. One would expect that students who have studied mechanical drawing during more than one school year for ten to fifteen hours per week would do better lettering and draw more exact figures for the exercises in plane geometry than students who were not studying mechanical drawing. From among fifty boys who had studied mechanical drawing as stated, I found but one boy who showed any signs of having taken special work in lettering, intersection of lines, etc. The work of the other boys was no better than the work of hundreds of boys who had not as much as seen a drawing board. Note, please, I do not say that the study of mechanical drawing does not assist the work in plane geometry, I shall discuss that point later. I merely give this in evidence of the belief that accuracy, neatness, etc., are greatly specialized activities.

This change in psychology will alter the opinion that a student who can do the complex problems of say fractions can do other complex problems. Now I have known college graduates who could not with accuracy and confidence solve the simple problems of mensuration. Athletes are continually teaching us that habits are very specific. The base-ball player will not play tennis because it affects his arm. The runner has strength and skill for the hundred yard dash but no strength or skill for base-ball. If we come to believe that mental powers are specific, we will accept the statement of Professor O'Shea that "an individual should be required to perform during his learning period those activities which he will be called upon to perform most often in maturity."

This will facilitate another change, the change of emphasis from the form to the content. The teaching of mathematics is often made unnecessarily difficult because of a lack of interest on the part of the pupil. We can scarcely blame the pupil, for who of us takes delight in skeletons. Once vitalize our subject with interesting and useful facts, the pupil's interest can be more easily incited and retained. This is especially necessary in

beginning the study of a branch of mathematics. Algebra and plane geometry have suffered greatly in this respect. Some recent text-books have attempted to remedy this matter. In algebra the pupil is given problems to solve which deal with the facts and the results can be verified with facts within the knowledge or requisition of the pupil. The industrial world is asking that the school make the contact between book knowledge and work knowledge, between the forms and formula of mathematics and the places where real problems are solved. How can this be done unless we give the pupils these same problems to solve?

To do this we need first of all new text-books, text-books in which the examples are taken from the industrial world, text-books which contain problems such as men in the shops or in the offices have actually solved. Several text-books are now on the market which have in part followed this plan and they are receiving a hearty welcome. However, we cannot expect to have "live" problems to illustrate every principle, but we can have enough to arouse and retain the interest of the pupil and make the study of mathematics increasingly useful; and I venture to say that there is enough "puzzle" instinct in the average pupil to carry him over the "bare" places.

Second, we should teach some of the short methods of the shop. The formulas and "rule of thumb" methods should be explained and the pupil may be taught to analyze these forms. Along with these short methods should come the teaching of the use, intelligent use of hand-books. These hand-books are veritable encyclopedias, and the ever-ready tool of thousands of workmen—and why should the high school pupil not know about them?

This leads me to say in the third place, that every high school curriculum should include a review of arithmetic with special attention given to mensuration. Mensuration should occupy far more space than it does at present. The lists of problems on stocks and bonds, brokerage, fractions, etc., should be shortened and the problems on live values and volumes should be substituted. If the review in arithmetic is given in the last year, lists of problems should be studied which require the use of logarithims and the trigonometric functions.

Another consideration is that the tandem style of teaching should be changed to the parallel method. The pupil should not study algebra *and* geometry *and* trigonometry but he should study mathematics. Algebra should be interpolated with and interpreted by plane geometry, and this in turn by plane trigonometry. This correlation should include parts of the work in physics. Thus the teacher in physics will not find it necessary to stop his work and teach the solution of formulas or the significance of ratio and proportion. In this plan a half-year of algebra should be followed by plane geometry. After certain parts have been completed, algebra should be resumed, then geometry again and so on. This form of teaching will unify the work in mathematics, and give it a form which makes its future use more ready and effective.

Although we may use the proper text-books, concrete problems, have reviews in arithmetic and rearrange the teaching order, all the work should be colored by the use of what has been called the Laboratory method. It is not necessary to enter into a prolonged discussion of this method for very few schools can have laboratories for mathematics. But we can all use some of the methods of the laboratory. This may include an extensive use of graphs and cross-section paper. In plane geometry numerical examples should receive attention. Formerly, we have, as it were, been afraid to say that line AB is 17 inches, lest perchance that would not sound "classic." It does not by any means follow that the abstract should be neglected, but the concrete first, then the abstract. This laboratory method will suggest that the pupil in plane geometry should first draw plane angles, equal to the triangle, by taking certain measurements. Let the pupil by handling become thoroughly familiar with the elements of the study. The pupil should be encouraged to devise illustrations of the theorems. For instance, in proving that the sum of the angles of a triangle equals two right angles, let him cut from card board a triangle. After cutting off two of the corners let him place them adjacent to the third and show that the exterior sides form a straight line. Thus the student learns the facts through diverse ways and so his knowledge is more permanent and more useful. One reason which encourages me to advocate this form of teaching is because mechanical drawing has proven a veritable asset to the teaching of geometry and plane trigonometry. I have found that students who have studied mechanical drawing, have less trouble in beginning and learning this subject than other students.

In short, the demand of the industrial school is that the high school should aim to prepare pupils for industrial conditions and not for college requirements only, that all the work should be done with the greatest possible sympathy for the future usefulness of the pupil. Thus by enlivening our work with the material of the work-a-day world, the pupil will be more interested, the parent better satisfied, and the school-product—the graduate—will have more bread-winning power. Throughout the course in mathematics let us have experiment, calculation, approximation, observation, induction, intuition, common sense.

CHANGES IN TEACHING MATHEMATICS.

Professor Robbins continued the discussion of this subject as follows:

One might almost say in looking over the programme for this meeting that its underlying thought is that of "demands." We are undoubtedly living in an age of increasing demands. The consumer demands cheaper fuel. The housewife demands cheaper meat, butter and eggs. Physicians are demanding more for professional service. Merchants in general demand more for their goods. Hotel

men demand higher rates. Workmen demand an increase of wages in order to meet the demands of those on whom they are dependent.

A few teachers bashfully intimate that it might be helpful in old age if teachers could be granted pensions. I sometimes think we ought to trace to a finish the idea that a college professor is any more entitled to a pension than any other teacher who is giving his life to humanity in the public schools of our country. Mr. Chairman, I think that outside of real lambs, turtle doves, and Mormon elders we are the meekest, gentlest creatures on earth. In the long list of demands that might be written, it cannot truthfully be put down that we demand higher salaries. But the public demands countless things of us as school people. The colleges demand that we do our work in a certain way, and in such amounts, to the end it would seem that high salaried professors may have as light a burden as possible, that threadbare traditions may be kept, that the college may continue to be considered on its pedestal, which rests upon the earth, to be sure, but which lifts the superstructure above the real affairs of human life. Now Santa Claus has left us a present in the form of a new demand, this time from industrial schools. I hope as children of larger growth we may carefully examine this gift, use it if it be good, or reject it if it be fragile or useless.

First: If the principle, "the greatest good for the greatest number," is correct, and I believe it is essentially, then we owe our greatest amount of effort to the boys and girls who will never get beyond the high school, for they are far in the majority. The public demands that our high school graduates be good for something. The claim that they are not makes us uncomfortable, for we know how hard we have been working. I believe that Spencer is right when he places near the top of his list, giving the order of importance of leading kinds of activities, "those which, by securing the necessaries of life, indirectly minister to self-preservation," and reserves for his last two points, "those activities which are involved in the maintenance of proper social and political relations," and "the miscellaneous activities which make up the leisure part of life, devoted to the gratification of tastes and feelings." It isn't that we have too large a wealthy or leisure class of people to-day, but parents of rich and poor alike do not insist upon it, and school authorities do not require first of all that our young people be taught those things which will help them to clothe and feed themselves, and lay by for old age,—what the poor should always do, and what the rich would have to do if wealth were suddenly snatched away. But you say this smacks of paternalism. Perhaps it does, but in my humble opinion it would be ten times better than a good deal of unnamed paternalism already in our schools. Unfortunately we are much hampered by local conditions. In our larger cities and more progressive boroughs there are in existence already facilities for work which in other cities and towns will not be granted for years. The almost insuperable task in the latter cases is to educate those who control the funds which would make the desired facilities possible.

Second: I know not what may be said today about college preparatory work, but personally I am of the opinion (1) that the way we are teaching the various branches, college preparatory work is *not* the best for pupils in general; (2) that the problem is one which is partially local; (3) this being the case, in smaller high schools, college preparatory work should be considered largely a side issue, and that the high school curriculum may be framed for the great body of pupils, and the comparatively few prospective college students may be provided for afterward.

Third: To consider the proposal to change the teaching of mathematics to suit the industrial school people immediately suggests the question whether there is general need for this change. How many of the high schools here represented have graduates who go to industrial schools? So far as I am able to learn during the last ten years Phœnixville has had as many non-graduates in the various industrial schools in the city as there have been graduates. Now, the non-graduates of our high school have been far less prepared in mathematics than the graduates, and yet they appear to have gotten along satisfactorily. I am reliably informed also, that in Philadelphia a great many students at the various industrial schools have never gone beyond the grammar school. Many young people have seen their own mistakes in leaving school so young, and are now trying to do something that will help them to live, before it shall be forever too late.

If it is true that mathematics, as the industrial school people want it taught, will do better for the young people who will not enter those schools than the subject as we now teach it, I am decidedly in favor of making the changes asked for. If it is not true, let us stick to the old a little longer. I know we feel sometimes that we are dissipating energy in mathematics. At best we teach little that is practical. If the large amount of general work has not a real educational value, then it is time to eliminate with a vengeance. If specific discipline counts above all else, then we must hope by and by to have little textbooks dealing with specific subjects in mathematics, or else a large book covering the line from arithmetic up to trigonometry or surveying, without having to divide up the subject as we now do.

Dr. Yocum congratulated the Department on its finely correlated programme and the sane tone of the papers. The advocates of industrial education do not insist on industrial high schools, but only ask for emphasis of their subject. Two conflicting ideals give rise to the problems of secondary education to-day. The first of these is the demands of the college. altogether academic in their nature and generally determined by a specialist who is at the head of a department. The second

is the demand from below that general discipline shall not be neglected. It is therefore necessary to compromise. Courses and college requirements vary over the country. We can not solve the problem by the preparation of specialists in the high schools. A specialized high school is dangerous to democracy. If certain classes are trained for business, the trades, we will finally create social classes. We must have an institution where the mass can get common knowledge. We must have vocational schools. The demand is small but insistent. This is proved by the remarks of Dr. Schaeffer last night, the census, and some recent articles in the Philadelphia *Press*. But our high schools must not become vocational schools.

SURVEY OF WORK IN MATHEMATICS.

Miss Jane Mathews, of the Allegheny High School, presented the following paper on the subject: "A General Survey of the Work on High School Mathematics to be done by the International Commission on the Teaching of Mathematics."

I have been asked by the Secretary of the Science and Mathematics section of this Department, to make a brief report of the scope and aim of the work to be done by the International Commission on the Teaching of Mathematics. What I shall say must, of necessity, be fragmentary and incomplete, for much data cannot yet be obtained, as the committees are still hard at work, and some have not yet completed their questionnaires. A few committees expect to make some preliminary reports at the meeting of the American Federation of Teachers of Mathematics and Natural Science which is held this week at Boston; but, of course, these reports are not available to us.

The data that I give I have obtained from the official organ of the Commission, School Science and Mathematics, from Dr. Smith's article in the *Educational Review* of December and through correspondence with Dr. Smith and various chairmen of the committees. I hope my paper will be but the preface of a discussion which, I think, will be far more profitable to us as practical teachers than listening to a long and tiresome résumé. Most of you, present, have heard something of the work of the commission; and some of you have received questionnaires from different sub-committees which you have answered, or expect to answer when the time can be taken from some less pressing demand. Do not put it off too long, for the commission depends on you for its success. I know that it is no small task that is asked of you, and some of the questions are perplexing, but it is not expected that it be the work of one person only. I would suggest that a principal, or head of department, divide the questions among all his teachers of mathematics, thus lightening his own work and getting a variety of opinions.

Mr. Betz, chairman of one of the most important sub-committees, has written me that several reports have been returned to him, without the name of the teacher, or of the school. He very much regrets this, and asks me to add these remarks: "Please give your name and that of your school. Nameless circulars are worthless. Your name will not be used in connection with any information you may furnish, unless you expressly desire it. Please inform us as to the number of years you have taught mathematics. The weight of a criticism is proportional, frequently, to the experience of a teacher."

At the International Congress of Mathematicians, held at Rome, Italy, in 1908, a resolution was submitted to the congress to create an international commission to make a general study of the progress of mathematical instruction among the various nations. This resolution presented through the initiative of Dr. Smith, of the Teachers College, Columbia University, was enthusiastically endorsed and stands as follows: "The congress, recognizing the importance of a comparative study of the instruction of mathematics in the secondary schools of the different nations empowers Messrs. Klein, Greenhill and Fehs to form an international commission to study these questions, and present a general report to the next Congress."

The next Congress of Mathematicians meets at Cambridge, England, in 1912.

Prof. Klein, of Göttingen, one of the greatest mathematicians in the world, was made president, Prof. Sir George Greenhill, of London, vice-president, and Professor Fehs, of Geneva, general secretary of the commission. In September, 1908, an organization was effected. Seventeen European countries and the United States were made participating members, that is, their representatives are entitled to a vote. Fifteen other countries, throughout the world, were invited to be represented, though having no official vote.

The Central Board appointed national subcommissions, and named for the United States, Prof. Osgood of Harvard University, Prof. Smith of Columbia University, and Prof. Young of Chicago University, as the American commission. Upon the organization of this commission, Prof. Smith was made chairman, and some fifteen committees and more than sixty sub-committees, with a membership of over two hundred were organized. This, as Prof. Smith says, is not a body of professional reformers, but a body composed of practical teachers, and of some of the best mathematicians of the world. The European countries have responded most enthusiastically to the call, and they are represented by many mathematicians who are recognized as leaders in their respective departments. The state, in many cases, has offered official aid and support in the investigation, and in Germany and Hungary liberal appropriations have been made.

In this country the central government has not the power to give official support, but the Bureau of Education at Washington has given its hearty co-operation, though its powers and its funds are limited. It is to be hoped that the good friends of education in this country

will not allow the commission to languish for lack of funds, though at present there is no definite provision for its financial support. The work of the commission, in this country, has been extended to include the whole field of mathematical instruction from the kindergarten to the university, and to comprehend the work of all kinds of schools, common, private, technical, trade, etc. The following topics are considered by the various committees: The organization of the schools, and the general relation of each kind to the others; the mathematical curriculum in each type; the question of examinations, from the point of view of the schools; the methods employed in teaching mathematics; the preparation of the teachers of these subjects; also, the study of certain influences, tending to make better teachers of mathematics, our teachers' associations, institutes, state inspection and supervision, scientific societies and their publications, and the valuable, though often unappreciated, influence of publishers of textbooks and their agents.

The spirit of the investigation is judicial not legislative. The function of a report is not, primarily, to make recommendations, though they have that privilege, but to give a digest of all recommendations of consequence. It is desired that these reports be discussed in as many meetings of teachers, and of mathemticians as possible, to the end that they may when finally printed reflect the sentiment of the teaching profession and of the mathematicians of the country.

The subject of mathematics does not generally appeal to the young; its difficulties are obvious, its benefits not so evident. It has been said by one writer that we have provided for the brilliant pupil in his work in mathematics, and, by election, for the submerged tenth who has neither desire nor ability to conquer its difficulties; but we have not taken such good care of the average student. We are confronted, therefore, with the problem of making mathematics more attractive to this large group of students. Shall there be evolved a kind of mathematical laboratory from these efforts, where geometry and algebra are fused just as the science laboratory has been evolved from the text-book instruction of our fathers? Shall we have to make our teaching simpler, our text-books less elaborate? We cannot make experts out of the average body of students, and yet to follow many text-books is at the expense of interest, for the student becomes discouraged and bewildered. On the other hand, in our efforts to make the work attractive, is it possible to detract from its serious character, a result disastrous not only from its standpoint as a science, but from its practical value. These are some of the questions we are asked to answer by the commission.

The work of the commission, most interesting, to this body of teachers, is that which has to do with public high schools. This committee is under the chairmanship of Mr. Geo. W. Evans, Charlestown High School, Boston, Mass. One of the most important topics of this committee is, "Failures in the Technique of Secondary Teaching of Mathematics, their Causes and Remedies." I have had a few copies distributed among you, from the questionnaire sent me by the chairman of this committee, Mr. Betz of East High School, Rochester, N. Y., for I feel there are many topics suggested that we may discuss to advantage. Mr. Betz asked me to say that he will be glad to hear from as many members of the department as possible. He will gladly furnish you with a copy of this questionnaire if you do not have one. Those who have copies will notice that many pertinent questions are asked. What can be said of outdoor work in connection with geometry or trigonometry? Who has tried it successfully? What have we to say in regard to a course in observational geometry to precede deductive geometry? The percentage of failures in mathematics is much higher in most schools than it should be. Are these failures due to poor teaching? Are they due to lack of time to secure thorough mastery of each principle, or to too much theory and not enough problems that appeal to young students. Failures in examinations are more frequent than the pupils' preparation would seem to justify. Most teachers of mathematics confront these unflattering conditions; the papers of a few pupils almost perfect, but those of the rank and file miserably low. Where is the remedy? How do we conduct our recitations? How and when are lessons assigned? What is the amount of blackboard work? Of oral work? How frequent are our reviews? I hope we may discuss a number of these and other topics which the questionnaire suggests.

There is another sub-committee, of which I am a member and in whose work I am therefore especially interested. The committee that is to investigate the work of industrial classes in public schools. The questionnaire is not yet out, but will appear early in January, and its object will be to collect data on industrial education in common schools. We all know that this practical training of the hand which has been introduced in many schools, and which is growing in popularity among educators, is a movement in the right direction, and we believe it will come to have a permanent part in our system of education. Have we made our instruction in mathematics help or hinder this practical application of its principles in the shop or in the draughting room? Should we attempt a closer union of algebra and geometry for industrial students, a closer union between mathematics and the natural science, between mathematics and mechanics? It is important to find out the points of contact between mathematics and these subjects, and not only to study the possibilities, but to take into account what has been successfully accomplished, and to study carefully the dangers involved. If a closer relationship between mathematics and these subjects seems desirable for a practical education, we must have exact data where knowledge of geometric notions has a direct bearing to the work in the shop or in the draughting room. We must know where a knowledge of fractions, of mensuration is needed, where we need the

linear equation, and where the equation of the second degree is used.

They have in England courses in mathematics called Shop Mathematics, in some of their institutes for industrial students. These courses are stripped of all but the practical, like some of the courses given by our correspondence schools. Should we introduce similar work in our schools, for industrial students, eliminating all but the practical; or should we lay stress on logical development and the utilitarian side, simultaneously?

These are a few of the questions to be asked, and we hope that they will be answered by a consensus of practical teachers, of expert mathematicians.

I have listened with great interest to the paper which has preceded mine, because our work, as teachers in the elementary schools has been judged and criticized from the standpoint of one who has the completing of the work we have begun, to fit industrial students for practical life. These criticisms are invaluable to us, as practical teachers, and I personally thank Mr. Morris for his valuable suggestions.

In conclusion, I hope my paper has accomplished two things: First, that it has suggested some topics for discussion; and second, that it has enlisted your sympathetic interest in the great work undertaken by the International Commission on the Teaching of Mathematics.

GENERAL DISCUSSION.

Mr. W. S. Steele: We in the Harrisburg high school have been doing what the first paper suggested. There should be more original work demanded. We require all of algebra and plane geometry. About ten per cent. of the students who take this work are dull. They can do no original work, and rely wholly on memory to get them through. These pupils could never make a living through applied mathematics. One-half of them are lazy. No one can do anything with them. What is to be done with pupils who don't want to learn anything? Some pupils are strong on the side of language and weak in mathematics. What could be substituted for algebra in their case? I have swung with the pendulum, and am now at the end of the arc where I believe that some high school pupils can not do anything. In our school we have a fine individual teacher, who works with ten per cent. of our pupils. To half of them she is a benefit; to the other half she may be an injury. What can be done with such pupils?

Mr. B. S. Graham: Among the causes of failure among high school pupils might be named the following: 1. The presentation of the work by inexperienced teachers. It takes a newly graduated college man a year to learn how to present his subjects. Inexperienced teachers should be put anywhere but in first-year work. 2. Inability of teachers without experience to use the textbooks provided. 3. Lack of sympathy with young people. 4. Forty to fifty minutes to a recitation and twenty to forty pupils in a class. It is almost impossible to cover the work in that time. 5. Most high schools give a year and a half of algebra, then geometry and trigonometry. It would be a better plan to teach algebra the first year, omitting the difficult parts like the greatest common divisor, least common multiple, fractions, etc., and give enough of quadratics for taking up plane geometry. Afterward the harder parts of algebra could be taken up, and with fewer failures. Failures in high school work usually recur about the middle of the second year. 6. The proper assignment of lessons—the presurvey of the lessons is indispensable.

Mr. T. L. Brooks: A good many teachers do not know their pupils, so their pupils do not know their lessons. We have had one high school teacher visit the home of every pupil of our school this term, and no pupils have dropped out. Should pupils who make only forty per cent. in mathematics be allowed to graduate? We never refuse to graduate such pupils, if they have made a proper effort. We do not believe that our function is to make teachers of mathematics. A year's work is a year's work, and should merit a diploma even though every examination average is not up to the standard. Some theorems of geometry should be taught in the seventh or eighth grades. It is not fair to examine pupils in algebra after dropping it for a year or two.

Mr. Dickson: Is it wise to give a reward for work not done. This is not the practice of the outside world. As to Mr. Steele's ten per cent: we would all like to know what to do with it. Alas, the gods are powerless against stupidity! Laziness and too many outside interests do their part toward holding some pupils back. How many teachers use the laboratory method in mathematics? (Two hands were raised.) Do you know of any college in Pennsylvania which uses it? When we wanted to see such work we had to visit Chicago University. That method is part of the solution of our problem. What is your opinion of geometry and algebra for pupils of fourteen or fifteen? I believe it to be far too abstract. We have never had a teacher who could use the laboratory method. Twenty-five to forty per cent. of the pupils need no teaching; thirty-five per cent. need some teaching. The remainder need a good deal of help, and with the laboratory method they can get it. Maximum and minimum work are laid out for the class. Some pupils complete it by

the first of May without assistance from the teacher. This leaves the teacher with considerable time to help individual pupils. As a result, none fail entirely. Some do only half the year's work, but it is well done. They know it. Pupils differ greatly in ability. Some do their work in from seven to eight months and others take two years. The advantage of the laboratory method is that it provides for all classes of pupils.

Mr. Steele: I have graduated students who did not pass in mathematics. Would you think it wise to graduate students with an average of forty per cent.?

Mr. Brooks: Would you think it right to graduate pupils with forty in algebra if they passed in their other subjects?

Member: They might be graduated with a low mark in mathematics, but they should know what they really earned in that branch. Forty per cent. ought not to be called seventy-five.

Question: Does not part of this trouble come from the colleges trying to impress their methods on the high schools?

Supt. Lose: Why did Prof. Morris emphasize mensuration in his paper?

Prof. Morris: Because of its great use in industrial life. No part of arithmetic is of greater value in practical life. It brings into use the practical ingenuity of the pupil. It is interesting to him. It gives the teacher more opportunities to explain points, when the pupil is actually measuring.

Mr. Dickson said that he had recently seen a class of forty workingmen who were studying mechanical drawing. They knew no algebra or geometry. They needed mechanical drawing, but all lacked a knowledge of mensuration. They were acquainted with old rule-of-thumb methods only. Most of them had been through the eighth grade, but had no knowledge of the subjects of mensuration.

Question: Why not omit mathematics from the course of those pupils who show no aptitude for the subject, and develop their strong sides? Of what practical value is geometry for most girls? Why not let them study decorative art? It would be of more benefit to them.

Mr. Cole: We allow any pupil to graduate who does the work and give a general diploma only. We alternate algebra and geometry. A larger percentage of students do better work in that way.

Mr. Robbins: Last year we had a girl in the senior class who passed in everything except geometry. She took the examination five times. The passing mark is 65 per cent. She made 62, and was not allowed to graduate. I am ashamed that such a thing was done.

Member: The average girl will be married in five or ten years after graduation. Isn't it a sin to make her take geometry when she would be far more benefitted by the chemistry of food, air, etc. Many girls absolutely can not do the required work in mathematics.

Member: How shall it be determined, and when—who are fitted for mathematical study and who are not? Shall the teacher decide this or the pupil? Would it not be difficult to do?

Mr. Jones: We have been requiring work beyond the capacity of fourteen-year-old pupils. Either another year must be added to the high school course, or we must give up the idea of the high school as the people's college, and make it a strictly college preparatory school. The colleges are controlling our high schools to-day. Only our best pupils are receiving instruction suited to their ability.

Mr. Pelton: There are certain periods in the lives of pupils which are adapted to the study of certain subjects. These periods can not be ignored. Could not the work be adapted to the maturity of the pupil, if we could determine that?

Mr. Morris: Mathematical work should be divided into two kinds, one on theoretical lines, another on experimental lines. The student should be put into the class where he belongs. We need less old-line algebra and more geometry or mensuration. Let the dull pupils take the practical course. This will satisfy a great want in the industrial world.

Supt. Green: Should arithmetic be taught in the high school, and how much?

Dr. Yocum: That can not be settled unless we know whether high school graduates know arithmetic. If they do not, we must put it in.

Dr. Schaeffer: The college entrance requirements in mathematics are a serious problem to the high schools. A professor at Lafayette told me at one time that that college had provided for every type of mind except the non-mathematical type. Now Dr. Warfield has changed all that. Some courses require much mathematical knowledge; others do not. Liebig, the great chemist, was hardly permitted to graduate from school; but a great scientist was saved to the world. Macaulay was notoriously a failure in mathematics. With the present courses of study, some pupils can not graduate at eighteen years. The old-time college may finally disappear. Our special schools require a four years' high school course for entrance; and this has created a tendency to omit the college

course, on account of the time required. The small college is being driven to the wall by the university. Almost any mind can master Robinson's algebra. When working in a normal school I used to call out the weak minds and group them together. Only once did I fail, and that student became the most rapid ticket-seller in the Broad Street Station, Philadelphia. Where are we getting to? Greek is almost gone. Only half the pupils study Latin. We are expected to meet the requirements of the technical schools, but the jacking-up of their requirements has made it almost impossible to do so. At Johns Hopkins University they do not want students to study chemistry in the high school. They make their entrance requirements in this branch so stiff as to make it impossible for any high school to meet them. At Indiana University four out of five class periods are devoted to ordinary recitations. The fifth is spent around a table, professor and pupils working together. That is the sort of individual instruction needed. If the colleges taught that way their entrance requirements could be made easier.

DEPARTMENT OF SUPERINTENDENCE.

Deputy Supt. Teitrick announced a meeting of the Department of Superintendence of the National Educational Association, to take place in Indianapolis, March 1, 2 and 3. He said that this was one of the best educational meetings which he attended. The National Association does not realize what a splendid force of teachers Pennsylvania has. New York, Ohio and the states of the Middle West feel that they are the representative states educationally. The fee for associate membership in the National Educational Association is $2 each year; for active membership $4, the first year and $2 each year thereafter. If you want a special train write me and I will arrange the rest. The next meeting of the National Educational Association will take place either in San Francisco or Boston—probably the latter. It is hoped that Pennsylvania teachers will turn out in force at that meeting.

Mr. Breidinger asked why all the members of the Pennsylvania Association did not receive copies of the volume of proceedings.

Mr. Teitrick explained that because of an unexpectedly large summer enrollment, a sufficient number of sheets had not been printed. But fifteen hundred had been ordered of the Department meetings. This order has been made three thousand for the year 1910.

Another member asked why all members of the Department do not receive *The Pennsylvania School Journal,* and suggested that the membership fee should include subscription to *The Journal.*

Mr. Smith: As teachers we ought to subscribe to our state educational journal individually. It is worth what it costs in addition to the membership fee here. I was amazed to find that not ten per cent. of our teachers are subscribers.

COMMITTEES APPOINTED.

The President at this time appointed the following committees:

Resolutions—F. L. Homer, Pittsburg; C. S. Webb, Franklin; B. W. Fisher, Lancaster; Rhys Powell, Scranton; Jonas Wagner, Bellefonte; Jno. W. Moyer, Philadelphia.

Auditing Committee—B. S. Graham, Greensburg; J. A. Stewart, Altoona; L. B. Nye, Steelton.

Nominations—J. P. Breidinger, Wilkes-Barre; G. D. Robb, Altoona; P. W. Bullard, Williamsport; J. F. Adams, Millersburg; Landis Tanger, Scottdale.

Science and Mathematics Section—B. C. Graham, Greensburg; G. W. C. Henschen, Harrisburg; Miss Jane Mathews, Altoona.

Adjourned.

WEDNESDAY AFTERNOON.

THE first subject of the afternoon was treated in full by Prof. Edwin Lee, of the department of chemistry, Allegheny College; and Prof. John B. Geissinger, Du Bois, Pa. As it appeared on the programme the question was "The Legitimate Scope of the Small High School in Relation to Preparation for College." Prof. Lee's paper is here given:

HIGH SCHOOL PREPARATION FOR COLLEGE.

"What, then, is education, and how are we to educate? As yet there is no agreement on these points. Men are not agreed as to what the young should learn, with a view either to perfect training or the best life. It is not agreed whether education is to aim at the development of the intellect or of the moral character. Nor is it clear whether, in order to bring about these results, we are to train in what leads to virture, in what is useful for ordinary life, or in abstract science."

These, says Horne, are the modern words of Aristotle. They indicate for us the Babel of voices in the educational world. The times call not for another voice, louder than the others, but, if it can be had, for a quiet vision of the compelling truth.

.We have fallen of late into a deep discontent with the secondary schools and colleges, and with the life and work of their graduates. It is an honorable discontent, however, bred

in us by devotion, not by mere captiousness or hostility or by an unreasonable impatience to set the world right. We are not merely critics; we are anxious and thoughtful friends. We are neither cynics nor pessimists; we are honest believers in the possibilities of our educational systems. As President Woodrow Wilson says, "We would fain keep one of the finest instrumentalities of our national life from falling short of its best, and believe that by a little more care and candor we can do so."

This paper represents, therefore, an earnest endeavor to help remove the veil from the face of educational truth that the teacher may find his or her way to the appointed task with less confusion and less frittering away of energy. Personally, I have no war to wage, not even a battle to fight. My purpose has been to do the more serviceable thing though it be less spectacular.

The educational world, like the world of industry, finance and of material force of every sort, is not stable. It exists in a constant stage of flux and flow. Out of this instability have emerged new forces, new facts, and new and complicated relations of old facts and forces, with the result that we face many new and difficult problems. At present there is a fundamental misunderstanding along the whole line of the educational system. The failure of the work of the secondary schools to articulate nicely with the work of the college is a festering and constantly irritated sore; the organization of education in the United States leaves much to be desired, but I contend that these are minor failures and merely incidental to a graver fault, namely, an inability to fix upon a definite "working ideal."

Why this chaotic state of educational tendencies? Can causal relationships be established? In reply, I would say that this confusion and perplexity are natural and to-be-expected outgrowths of the evolution of our educational system.

Our first preparatory or secondary schools were established *solely* for the preparation of boys for college, and in its inception, at least in the East, the high school was little more than a publicly supported Latin school of the old colonial type. It was a stepping-stone to the college, and not to the solution of the problems of life. It had no ideals worthy of the name.

Our first American colleges were founded originally on the classics and humanities. It had been imported to meet the needs of the colonists. "In those early days, a college education was regarded as an end in itself. It represented a state into which young men of good parts and of good family fortune might enter. Men were bred by it to no skill or craft or calling; the discipline to which they were subjected had a more general object. The ideals which lay at its heart were the *general* ideals of conduct, right living, and right thinking. It was a world, not of interests, but of ideas. It embodied a condition rather than a force.

Had these ideals continued to abide; had these principles remained dominant, there would be no necessity for the discussion in which we are about to indulge. The work of the secondary schools would have remained nicely co-ordinated with the work of the colleges and universities. But "the history of education is a vital part of the race's record of its own advancement. It is a record of the prophetic provision of the race to achieve its ideals. Therefore, when the life of the nation began to fairly tingle with the romance of activity, and when Science and the various industrial and social questions, together with the political and international problems pressed forward for recognition, a great wave of public sentiment refused to be dashed into pieces upon the rocks of tradition, and finally crystallized into a demand for an education that would meet the practical demands of everyday life with its necessary complications. The majority of the high schools made an immediate effort to meet the demands of the people. New questions regarding the courses of study arose. The demands of the college entrance board and those of life were soon seen to differ materially. With very few exceptions the colleges stubbornly resisted change. Habits, vested interests, and traditions prevailed. The colleges clung to their established courses. Harmony gave place to discord. The relations existing between high school and college were fractured. To date, the fracture has not been reduced satisfactorily. The schools and colleges, however, immediately initiated experiments with the courses of study in the endeavor to ascertain what came nearest to remedying the defects. This process of experimentation has now been going on for many years, and has not yet ceased; nor will it cease, in all probability, until we can have much fuller assurance than we have to-day that a solution has been reached.

The process is familiar to every one by which the disintegration was finally brought about which destroyed the old college with its fixed discipline and ordered life, and gave us our own present problem of reorganization and recovery. When in 1870, the utilitarian character of the age pressed in upon the colleges, as it had touched every other department of life, they executed a full "right-about" to save themselves. The old curriculum was sadly distorted by the introduction of the principle that the student was to select his own studies from a great variety of courses. This principle held at heart a tremendous implication; the implication of full manhood on the part of the pupil, and all the untrammeled choices of manhood. The teacher ceased to look upon himself as related in any responsible way to the life of his pupils, —to what they should be doing and thinking of between one class exercise and another, and conceived his whole duty to have been performed when he had given his lecture and afforded those who were appointed to come, the opportunity to hear and heed if they chose.

"Yet no one need regret the breaking up of the dead levels of the old college, and the introduction and exaltation of modern studies, or the general quickening of life which has made our youngsters more manly fellows, if

less docile pupils. There had come to be something rather narrow and dull and morbid, no doubt, about the old college before its day was over. But whatever the verdict passed on the efficacy of the educational application, nowhere else have American energy and intelligence achieved a more solid result than in this widening of the scope of higher education in its frank recognition of the culture value and dignity of science and the useful arts."

During this same period the high schools were wavering in their uncertainty. "A brief survey of the development of our educational system during the last thirty years brings out the fact," says Mr. Pritchett in his Third Annual Report of the Carnegie Foundation for the Advancement of Teaching, "that the preparatory schools have felt sharply the difficulties and the annoyance of an ill-defined field of work." On the one hand there has been a clamor for a type of education which yields "social efficiency"; on the other hand, there has been a constant demand for a training that prepares boys and girls for college. These latter institutions have enhanced the difficulties by offering work that varies from that of a true college, articulating with the standard high school offering four years of fruitful study, to institutions so low in grade that their courses of study do not equal those of a good high school. The secondary schools are simply bewildered. Their ideals have been lost in the confusion. They, like the colleges, have lost their definiteness of aim.

It is evident that we have now for a long generation devoted ourselves to promoting changes which have resulted in all but complete disorganization, and it is our plain and immediate duty to form plans for reorganization. We must re-examine the secondary schools and colleges; reconceive them; reorganize them. They are the roots of our intellectual life as a nation. They are our chief instruments for catholic enlightenment, our chief means for giving wide-spread stimulation to the whole intellectual life of the country and supply ourselves with men who shall comprehend both their age and duty and know how to serve them supremely well.

Here then is our situation, as summarized by President Woodrow Wilson in his Phi Beta Kappa address before the Society of Massachusetts: Here is the little world of teachers and pupils, athletic associations, musical and literary clubs, social organizations and societies for amusement, class room and playground, of which we must make an analysis, out of which we must get a new synthesis, a *definite aim* and new processes of authoritative direction, *losing nothing* that *has been* gained, recovering what has been lost. All the fresh elements we have gained are valuable, many of the new points of view are those from which we must look upon the whole task and function of the college educational system if we would see it truly; but we have fallen upon an almost hopeless confusion and an utter dispersion of energy. We must pull the whole inorganic thing together under a new conception of what our educational institutions must be and do.

What is the legitimate scope of the high school?

Fellow teachers, this question cannot possibly be answered in anything like a satisfactory manner until we are practically agreed upon the aim of education—until our educational systems are animated and dominated by definiteness of aim.

The frequent answer to these implied questions is, "The aim of our educational system is to insure a liberal education to the individual." But this is merely side-stepping the great question, "What constitutes a liberal education?" Because we have not united in the solution of this problem, our educational systems have lost much of their efficiency. Mr. Charles Francis Adams, of the Harvard Board of Overseers, says in this connection: "The authorities are as wide apart now as ever they were. There is no agreement, no united effort to a given end." To the same effect, Schurman, of Cornell, has recently declared: "The college is without clear-cut notions of what a liberal education is and how it is to be secured, . . . and the pity of it is that this is not a local or special disability, but a paralysis affecting every college of arts in America." Every institution has its recognized place in the elaborate and complicated system, but the whole machine has been thrown out of gear by the experiment of attempting to readjust the present distribution of educational functions. It is surely obvious to the most superficial observer that this change of educational purpose has not yet found expression in the spirit, subject-matter, methods and organization of its curriculum. This, to say the least, is unfortunate.

Mr. Flexner, author of the "American College," finds the solution of many of these problems assured when the high school problem is solved. He says, "The secondary school is the key to the college position. On the vigor and intelligence of the secondary school, the permanent solution of the college problem now depends. How can we decide the length, organization, content of a college course until we have in some sort mapped out, on the basis of successful experiment, the territory that can be covered in the secondary school?"

The question that is now fairly before us is—what shall be the function of the high school? Shall it confine its efforts to simply preparing young men and women to pass the college entrance examinations in the sense that that they have merely "covered" a prescribed course of study? Emphatically, no! Unreservedly, no! I contend that this is a false ideal viewed from any standpoint.

The object of a liberal training is not learning, but discipline and the enlightenment of the mind. Too many of our teachers conceive it their duty to impart learning. A system of preparatory education founded on this principle does not *locate the individual* and carry forward his development on appropriate lines; it fails to connect individuals with concrete opportunities. Viewed from the standpoint of the college, such a system is a failure, because the main value of a preparatory education, as related to the college, must turn

upon the help it affords the student in an emergency, upon which the outcome of his college education depends: the one question on entering college is, Has the student been so trained in his preparatory work that he can and will make a series of intelligent and rationally connected choices? The hard and fast preparatory school combination leaves this problem untouched. It affords the student no chance to disclose the capacity or to develop the purpose upon which shortly the college is going to presume; the teacher in such an institution becomes merely a drill master with no responsibility for the liberation or definition of the pupils' significant tendencies. In such a school under the most favorable conditions these tendencies are ignored; under less favorable conditions they are actually suppressed. This type of a school with this aim fails to effect an organic connection between preparatory education and college opportunity, therefore it is illogical when viewed from the standpoint of college need.

Nor does it, with this aim uppermost, embody the elements underlying the general social life, and therefore claim the warrant of social necessity. The fact is, no rational basis whatsoever can be made out for this type of a school, either from the individualistic, college, or social standpoint. Professor Munsterberg, of Harvard, frankly describes the product of such a system as a mass of "flabby inefficiency."

Shall the chief aim of our high schools and secondary schools be, then, to give boys the so-called "practical education?" The curse of these schools is the constant clamor of a particular class of people for a curriculum that will yield that which they have termed "social efficiency." The demands of commercial life are tremendous, but the gravest of dangers lie in pressing the utilitarian principle in education too far. It is not that institution which makes the greatest show of utility that develops the most effective men. If it is the primary aim of the high schools to prepare boys for the professions, then let these institutions frankly admit, as the technical schools do, that the *pursuit*,—the profession—becomes of more value than the *individual* in the sight of the instructor. Will an education based on such an ideal raise the intellectual ideals of a man, or will he lose his best ideals in the pursuit of the profession to which he has been trained from boyhood? Will it tone down mental faults and tone up mental weaknesses? Will it give him a working knowledge of the duties which as a cultured citizen he owes to the public or will he be absorbed in his profession? Obviously a system that regards the individual of less importance than the pursuit cannot measure up to these requirements.

Ladies and gentlemen, it is surely evident that the secondary schools must not inaugurate a system of education, which aims merely at the training of young men—boys, if you please—for this or that craft or profession; nor are these same schools to be dominated by the idea that their sole function is to fit the individual for college as it is narrowly conceived; they must be training schools for nothing less than life itself in its broadest and most vital relationships.

A school conceived with this as its duty will and should have for its goal—its one definite purpose—the development of *power* in the individual. The content of its curriculum, its organization, its teachers, must be dominated by this purpose. Every lecture must be formulated with this in mind; recitations and laboratory exercises must be directed with this in view. The teacher must constantly bear in mind that it is his or her duty to develop the power of the pupil. This must be the great fundamental and absorbing purpose of the instructor. That teacher who is familiarizing the student with a craft, or is coaching him to pass the college entrance examinations will lose this ideal. "The chief and characteristic mistake which the teachers are making," says the President of Princeton University, "is that in these latter days they have been devoting themselves and their plans too exclusively to the business—the very commonplace business—of instruction, to well-conceived lectures and approved class-room method, and have not enough regarded the life of the mind. The latter does not live by instruction." In defense of the teachers it may be said, they have not shirked; they have merely failed to grasp this conception of the function of education. "The teachers' task, that to which all their energies must be directed," says Professor Hart, "is to develop great thinkers—men who will extend the boundaries of knowledge."

In working out the details of this type of education, it becomes evident that more will depend upon the quality of the teacher than upon the quality of the curriculum. It is the teacher that exerts the influence which shapes most. The processes of life, the contagions of association, are the only things that have ever got any real or permanent hold on men's minds. They are the conducting media for every effect we seek to work on the mind of the student. The teachers will give him nothing he is likely to carry through life if they stop with formal instruction, however thorough and exacting it may be. So long as instruction and life do not merge in our schools, so long will the schools be ineffectual.

And now as to the content of the curriculum: We cannot do better in the effort to state the status of this problem than to quote Aristotle, "Men are not agreed as to what the young should learn, with a view either to perfect training or the best life." This question invariably precipitates the sharpest controversy. There is little or no agreement at the present time as to the courses of study which should be placed in the curricula of the secondary schools. I do not presume to venture what shall be the content of the high school curriculum further than to say it must represent such courses of study as will lend themselves readily to the making of an *educated* man. I am not sure that many of the studies included in the much belabored "college entrance requirements" will not serve as an excellent nucleus around which to develop such a curriculum as we need, *provid-*

ing the aim, the ideal of the teacher, will be to develop an individual of power rather than a thing able to pass the entrance examinations of a college.

In the effort to arrange a tentative high school curriculum—a curriculum that will meet our requirements, and in the endeavor to secure an expression of opinion as to "the legitimate scope of the small high school," no less than twenty letters were written to as many different college and secondary-school men. With but few exceptions, they expressed as their opinion, that it is the duty of the high school to educate the individual *broadly* and *liberally*, rather than to fit him for college or familiarize him with the processes of a craft or trade. All are practically agreed that the first two years work of "the college entrance requirements" should be in the curriculum,—and that the smaller high schools should not attempt to complete the more elaborate courses of the larger high schools, regardless of their aim.

Relative to the content of the curriculum, President Jordan, of Leland Stanford University, says (Fourth Annual Report) "the high school curriculum is primarily a problem for the secondary schoolmen; that the University (or college) while lending its assistance by way of advice and insistence upon high standards should avoid all intent or appearance of dictation." And again: "It was believed that the methods and standards of work in the high school needed to be changed." "And if I may draw the obvious conclusion," says Mr. Flexner, "such changes must largely be worked out by and within the high school. I am not, of course, urging that the high school be cut loose and left to itself. On the contrary, a real, inner, organic connection is to be sought, in place of the nominal, artificial bond existing."

There is a marked feeling against the small, insufficiently-equipped high schools attempting to prepare students for college. If the larger and better-appointed high schools have failed at this point, surely there is little likelihood of the small high schools accomplishing this result. It is this superficial type of work which makes men and women superficial in their observations and slovenly in their habits of thought. The state should determine whether two, three or four years work can be done properly by this or that school. This might be regarded as unfair and unjust to the pupils of the schools restricted if the state did not provide for a continuation of their studies in a larger high school.

Mr. Pritchett makes a fair statement of the situation: "It is, I believe, admitted by those who are most familiar with the conditions of schools throughout the United States that the weakness and inefficiency of the elementary and secondary schools, arising in the first place from lack of clear conceptions of what these schools should actually seek to do, are apparent, first, in the effort to teach too many things, and second, in the lack of competent teachers. In other words, the secondary schools, like the institutions of higher learning, have attempted too many subjects to the neglect of the fundamental intellectual training common to all education. The remedy is to be found in clearer definitions of purpose, variation of school types, and more simple and thorough curricula."

Let it be remembered, however, that the high schools which at present are our most valuable agencies of secondary education, originally powerfully influenced the colleges. They first created the "modern side" of education. In a measure it was their popularity that forced the colleges to accept science and the modern languages on a par with classics and mathematics. And there is no doubt in the mind of the speaker that the secondary schools still possess the power to influence the colleges. With the preparatory schools reformed in the direction suggested, the transition to college would be less mechanically regulated. The entrance examinations and certificates would undoubtedly be abolished. Entrance to college would be treated as a privilege, based on the range, seriousness and cohesiveness of previous study, together with the ability to do the Freshman work.

Facts bear out the argument of the paper. The members of the Freshman class in college, fail not because of a lack of familiarity with facts but because of an inability to think, to reason, to grasp relationships among facts —in short, they lack power.

As things now stand, a misinterpretation of the college entrance requirements and pressure of the utilitarian idea are the main hindrances to the proper development of secondary education. "External pressure has failed to make the preparatory school effective." A totally different conception of the function of education must be introduced. Our present scheme of education has failed for lack of sufficient insight. Our conceptions of the function of education have been altogether too narrow. My argument, therefore, contemplates not the abandonment, but the complete working out of a system of education that shall connect the individual with life. The broadest educational theory estimates the worth of all the human powers and has the highest notion of personality, the development of which demands the impact of physical, educational and moral forces. Stated in a more detailed form: the function of education is not merely or chiefly to turn out diploma holders or wage earners. It is to act upon every individual that he shall find himself at the earliest possible stage of his education, and then that there shall be developed 100 per cent. of the physical, mental and moral possibilities latent within him, as a strong, efficient, cultured, and high-minded citizen and problem-solver—a man who is more likely to contribute light than heat to a discussion. And there must be no shirking though the raw material be of an inferior grade; the standard must be the 100 per cent. of possible attainment. Both the high school and the college constantly prate about their educational ideals. Let each one practice what it preaches. It *must* adopt a high standard for its finished product.

ERIE MEETING OF STATE ASSOCIATION.

At this time Supt. Charles Lose, President of the Pennsylvania State Educational Association, was granted the floor and asked the co-operation of this Department in making the coming meeting at Erie in every way successful. He said there would be high school questions upon the programme and he assured all comers a pleasant trip, a good, profitable time, and that both himself and the Executive Committee would be heartily grateful for their presence and help of every sort, but especially towards increasing the membership of the Association.

TUITION OF NON-RESIDENT PUPILS.

State Supt. Schaeffer said that the last Legislature appropriated $100,000 for the payment of the tuition of non-resident high school pupils. This amount was asked for on the supposition that the Code would become law. As it did not, it now becomes necessary to devise a proper method for distributing this money. A circular will be sent by the School Department to every high school principal, which it is asked will be promptly filled out and returned.

Principal Geissinger now presented his paper, as follows, upon "The Legitimate Scope of the High School in Relation to Preparation for College."

HIGH SCHOOL PREPARATION FOR COLLEGE.

In consenting to present a paper in discussion of the subject of "The Scope of the Small High School in Relation to College Preparation" I did so only as a seeker after knowledge and not as an authority. I knew that I should get many points of illumination (both from my own study of the problem and from the able address of the first speaker, Prof. Lee), upon a subject of such vital importance in our educational work.

The whole matter of College entrance requirements and of what the high schools should do in the case is before us and, taken all together, the situation is one that calls for most earnest deliberation on the part of those who have to do with the administration of the two types of institutions concerned.

Within the last twenty-five years the development and growth of the high schools of the country have been very rapid. From the original one-course plan of the high school there have grown schools with parallel courses, with a wide election of subjects to meet the insistent local demands. As an outgrowth of all this development there are two distinct features that must be considered, namely, the function of the high school as a fitting school for life, and its function along the line of College preparation. Out of the completed course of the high school, large or small, there come two groups. The larger of these, at present, is the group of those who go directly into the work of life. Those of the smaller group enter the higher institutions for further preparation. This second group is rapidly approaching the first in size and there is no doubt that the two will be more nearly equal in the future.

In considering the relation of high school training to the immediate future of the youth, it is only natural that we put the stress on the interests of the greater number, if there is a difference in the kind of training demanded. That such a difference has existed in the past is evident when we examine the average high school course of study. It may also be seen that the interests of the smaller group have frequently been dominant in determining what is to be the content of the course of study for all.

The tendency to-day, however, is quite the other way. Everywhere the doctrine is "to adapt the programme of studies first of all to the needs of the community life, and to fitting for efficient service in that life." This fact the higher institutions readily recognize. As a result we find marked inclination among college and high school men to seek for a common ground of relationship. It is believed that the interests of the two groups may be so harmonized that the best preparation for life will mean, to the majority at least, preparation also for some line of college training.

In other words, it has come to be our working hypothesis "that, so far as preliminary training of a general character is concerned, preparation for college and preparation for life should coincide." This theory, as formerly stated, was as follows: "What is good preparation for college is good preparation for life." Now the terms are commonly inverted: "What is good preparation for life is good preparation for college." More and more the question of college entrance requirements is coming to be a question of what is best for the schools and the students; and a situation in which certain demands of the college were once the determining factor now finds its determining factor in the demands of the public high school.

Notwithstanding this general tendency which betokens a better time that is coming in our educational work, the movement has been slow to reach the small high school in Pennsylvania, and bring the much needed relief. Thus, as a matter of fact,

the average high school is still forced to plan its curriculum in conformity to the demands of the college in their requirements for entrance, in spite of the higher life interests of the great majority of students who never enter college. During the last quarter of a century the entrance requirements have been growing increasingly severe. The quantity of required work has risen from the equivalent of eight or nine units to from fourteen to sixteen units of high school work. This means practically everything in a complete four-years course in the high school.

In the face of these advancements, which apply alike in quantity for nearly all college courses, the high schools are now confronted in every town and city with a strong popular demand for a much wider range of work in vocational subjects. Commerce, the manual arts, agriculture and domestic science are calling upon the schools to do their duty by them and the rapidity with which they are being introduced into the schools of the country seems to establish beyond question the justice of their claims and their general cultural value.

In fact, history shows that the content of education in all times and ages has been largely determined by its utility; that knowledge is sought primarily for practical ends. Hence the individual must be educated in the lines along which society is moving or he becomes a misfit. In the past, the high school has catered more to the Colleges than to the public. It must now turn to the public and take up vocational work. Few things are more wasteful than work dominated by college ideals for a student with practical tastes. The high school can not be the people's school as long as it insists on demonstrating an abstract proposition in mathematics and refuses to recognize the educational value of making a loaf of bread or of drawing a gas engine.

When we consider the fact that the public high school was established on the fundamental principle of democracy—equal rights and equal opportunities for all—there can be no doubt that, in whatever it offers, it should give an equal chance to all. If this is done, then these various vocational studies must be offered in each high school or system of schools under one general organization. Such a plan is bound to bring confusion in results as measured by present standards of college entrances. On the part of the high school, Greek, some of the higher mathematics and advanced science will be forced to the wall as high school studies and left to be taken up in college at a more mature period in the life of the student. On the other hand these same studies which have stood forth during all these years as the strong towers in the fortifications thrown around the colleges by the college authorities themselves, will be undermined and lose their power and strength.

In the face of this new aspect of the problem which they have been compelled to face, undoubtedly at a disadvantage so far as the real immediate advancement of their work is concerned, what is to be the attitude of the colleges? Are they willing to modernize their courses sufficiently to touch actual life at more points? Or are there still in some colleges a few in the class with doubting Thomas who question whether things can be useful and cultural at the same time?

College entrance requirements have done an enormous amount of good to the school systems of this country and they are admirable institutions when they are framed by those whose devotion to young people is greater than their devotion to their speciality. But all must agree that this is not always the case, and as a consequence we still have certain traditional standards that are stubborn things to deal with. While we realize that such college standardization is valuable yet we claim that it needs to be balanced up by standardization from two other sources, namely, the local community and the educational authority of the State. Let the college continue to set certain general standards; let the community be encouraged to continue its demands for practical education and let the State enlarge her supervision and authority through inspection and classification.

Suppose then the colleges prescribe eleven or twelve of the units required for entrance. Would there be any distinct loss to the college student who might fill in any four or five additional units if the work was well done in the high school.

Let us take some imaginary cases. A college which is strictly classical might prescribe the following: English three units, mathematics three units, Latin four units, science and history each one unit, thus making twelve units. Would it make any material difference what the other four units of high school work might be if only the training were thorough and sound? Again, a college not holding to a strict classical basis for an A.B. degree, might substitute for four units in Latin, in case above, three units of modern language and an additional unit of science, thus again aggregating twelve units. Would there be need for any anxiety as to the other four units, provided they were well taught? Similar conclusions would follow in ar-

ranging a course of studies preparing for a technical college.

In each of these cases there may be opportunity for four years of vocational study, or one-fourth of the entire group of studies in the high school programme. What would be the result of such a plan? The student would have four years of training. He would have attained a maturity and acquired a certain working power which would enable him to take up the freshman work in college with ease and intelligence. And, after all, are not the four years of training with the maturity and power acquired about the most important thing? How many things learned in the high school are absolutely necessary to the beginning of courses in the freshman year at most of our colleges? We may grant elementary mathematics, a good secondary training in English with at least enough of foreign language to have mastered the essentials of grammar and to have acquired a fairly good working knowledge of a vocabulary. All other lines of work may be as well or better begun in the college if the student has a working ability and is sufficiently mature in mind. Under such conditions the small high school would have a chance to fulfill its function along the line of college preparation and at the same time remain true to its fundamental mission of providing for advanced "educational opportunities for all young people, whether their future is to be the college, the market or the shop."

The subject next in order was "The Legitimate Scope of the Small High School in Relation to Commercial and Industrial Demands."

COMMERCIAL AND INDUSTRIAL DEMANDS.

Mr. Parke Schoch, of the William Penn High School, Philadelphia, said that for the purposes of this discussion he would take the term "small high school" to mean a high school located in a town of not more than ten thousand population, and whose attendance was not more than one hundred and fifty or two hundred pupils. He would discuss the subject from two standpoints: (1) The demands of the immediate community on the small high school; and (2) the ability of the community to meet these demands.

The demands of business men vary with the businesses in which they happen to be engaged. No high school can meet them all. All-round development needs more than is required by business men—faculty training and hand training. High schools must fit for life. However, some things which business men demand the high school should supply if it aims to do commercial work at all. Among these are: (1) Accuracy and rapidity in performing arithmetical operations. Much practise work in addition, fractions, discount and interest should be given in school; (2) a good handwriting; (3) a practical knowledge of bookkeeping, stenography and typewriting are everywhere demanded; (4) good spelling and commercial letter-writing; (5) an education in the industries of the locality in which it is situated.

These may be called the primary scope of the small high school; but do not cover the whole ground. Boys in small towns look ahead to the time when they will remove to a large city. There is constant need in these large centers for what may be called embryo business men—that type of man ready to take hold of the administrative side of a great business. The high school must bear this need in mind. It must offer some education in the industries of the country, its raw materials, transportation, markets, banking methods, commercial law, etc. This might be styled the secondary scope of the small high school.

Commercial education in the high schools was introduced because of parental pressure. Often it was necessary to overcome the opposition of boards and principals. Even now there is scanty provision for it. One commercial teacher is sometimes compelled to try to cover the entire ground—a manifest impossibility. Some of these teachers are ladies eighteen or twenty years old, who have never had any commercial training. We should raise our voices against such parsimonious methods.

Parents send pupils to the commercial high school in order that they may be quickly self-sustaining. These pupils must have a definite preparation, or the business world has no use for them. The pupil must figure well, write a good hand, spell correctly, keep accounts, know stenography and typewriting. Then he has something to sell which the business world needs and will pay for.

To do this work fairly well in a small high school, with one commercial teacher, requires all of that teacher's time and a full equipment. He can not take on the duties of assistant to the principal and teachers in other departments. The work of this teacher must bring the students up to the point of practical usefulness. If we want our pupils to receive mental uplift, they must look for that in other departments. When boards and principals have a better conception of commercial education, then the schools will begin to fill their ideal scope.

Dr. Schaeffer: Does the teaching of English composition belong to the teacher

of the commercial branches? Out of thirty applicants for a clerical position, I could find only two who could write a correct letter.

Mr. Schock: No. That should be in the hands of the teacher of English.

Question: What is a small high school?

Mr. Schock: A school with one teacher in the commercial department.

Question: Would not this be an unbalanced school?

Dr. Schaeffer thought that it would.

Mr. Schock: Not sufficient time is now given in many schools for the acquiring of practical efficiency in stenography and typewriting.

Question: Where would you expect your graduates to work? How much time is given to stenography and shorthand in your school?

Mr. Schock: It is probable that in a small high school only a few pupils will take this course, as there are few business opportunities in such a community. The graduates may be employed elsewhere. To do good work in stenography requires two years—preferably three or four—forty-five minutes a day. Typewriting demands three or four periods a day for two years.

Mr. Breidinger: Will not such a commercial course exceed the demands of the community? Should a small high school try to replace the business college? There seems to be a shifting of responsibility between the commercial and English departments as to the teaching of composition. It is not quite the function of the English department to teach letter writing.

Mr. Schock: If the teacher of stenography and bookkeeping is to be held responsible for results in those branches, then the English department must take over the study of letter-writing. If the English teacher is not fit to do the work, the commercial department must shoulder the responsibility. What is wanted is efficient graduates.

Mr. Stein: In towns of 3,000 to 10,000 population, the commercial teacher would have sufficient time to do the work well. In towns of more than 10,000 the English department must take over the work.

Dept. Supt. Teitrick: How about the teaching of English to the pupils of the college preparatory course?

Mr. Schock: If the arrangement of the course is ideal—and it can be made so—the pupils of the commercial department receive the same English training as other pupils. There is no such thing as business English.

Mr. Teitrick: As a matter of fact, do the pupils of the commercial course take much interest in the study of English?

Mr. Webb: Some of our best students take four years' English. We find our commercial graduates on a par with our college preparatory graduates.

Mr. Breidinger: We give a different course in English, but the same number of years work to our commercial students as to others. There are some things better for them than the study of some college entrance selections. In a small high school this could not be done.

Mr. Jones: Easton has the oldest commercial course in the State. We first tried a three years' course, but soon increased it to four years. At first the commercial students were isolated from the other students, but we gladly brought them back again, and there is practically no division in mathematics or English. The course is so planned that a boy who at fourteen elected the commercial course and later wishes to do the college preparatory work, can do so in one year.

A member said that a few years ago he taught in a small high school with two teachers. A commercial teacher was added, who took over the English. The arrangement was highly successful.

Question: Ought the commercial course prepare students to be money-getters at once?

Mr. Jones: Very decidedly. That is the purpose of the commercial course. A certain percentage of the community will not patronize the schools unless they can see an immediate money return. The question becomes one of keeping the students in the schools. If their high school training will give them the ability to earn $12 or $15 per week they will stay; otherwise not. The commercial high school can prepare a student for such a position. Five boys out of one of our classes were earning $1,000 per year before they were nineteen. This was our best advertisement. Our attendance increased from 350 to 400 as soon as the fact became known. The question is not one of mental development, but an entirely practical one: Shall we have the students in our schools or not?

Question: Is it the function of the high school to make money-getters on the industrial side? This is an era of specialization. Should the high school prepare its pupils to fit into a narrow niche, so that in after life they will be at the mercy of their training?

Another member said that he had seen men who had become part of a lathe or a grindstone. If modern machinery were to supplant their hand labor, they would be helpless. We want to develop mental power in our students as well as make them money producers. We are commer-

cially mad when we think only of turning mind into dollars.

Another member said that it is the duty of the high school to direct boys towards the trades. Too many boys think they cannot earn a good living that way, and dishonor has been attached to overalls. The high school should insist upon the dignity of labor. Not only commercial studies but those relating to the shop should be taught. It is better to turn out first-rate mechanics than third-rate engineers. The school should show the boy that he can use his brain at brick-laying as well as in the office. The student should know something of the life and wages earned by mechanics. The college-trained teachers are partly to blame for leading children into discontent with labor in the trades.

Miss Mathews: In a certain office in Allegheny one hundred and twenty women are working, forty of whom are typewriters. The trouble with most of these women is that they are machines—they can not think. All are graduates of a high school. The manager told me that when he wants thinkers he gets them from a small high school in Wisconsin. He does not want his letters to be reproductions of books, but to possess individuality. In Allegheny the commercial course at first included two years' work, which was later increased to four. Graduates of the short course have come back and asked why they did not receive broader English training. They needed it to prevent becoming machines. They would make far better employees with beauty in their souls.

Question: Is there a need anywhere for the commercial training which can be given in two years in a small high school?

Prof. Snyder: The commercial course in the Pittsburg High School is four years in length. We lose 25 per cent. of the pupils because of the time required. Some of these find work at once. Many of the rest take a six months' course in a local business college, so as to get to work sooner. We have a "two-year option." In the first two years there are certain electives. Without that plan we could not hold two-thirds of our pupils.

Prof. Dickson: The ideal commercial course is four years in length; but many pupils will leave the high school for the business college before the end of such a course. They can not afford to spend four years in the high school. The question is an economic one.

Mr. Breidinger: Could the work be so arranged that graduates of other courses could do the commercial work in one year.

Mr. Dickson: There is no demand for such an arrangement.

Mr. Breidinger: I have met with such a demand.

Prof. Snyder: We have two or three such demands each year in Pittsburg. It takes a year or a year and a half for these pupils to complete the commercial course. They spend a large part of their time in our office. The text-book work goes rapidly.

Mr. Jones: Twelve such students in the last four years have completed the commercial course in one year at our school. They seemed to have an ideal preparation for the business world.

Mr. Breidinger said that he had a two-year commercial course at first, but it had been increased to four years. With a shorter course the pupils received too little preparation in English.

Mr. Smith: We have arranged the course so as to give our pupils the most necessary branches in their first year. The work of each succeeding year will fit him on a higher plane of commercial usefulness. No matter what the course, all the pupils will not remain for four years, or three or two.

Inspector Hertzog: Do graduates of a two years' course secure positions?

Mr. Smith: None leave unless they secure positions.

Question: How do you decide the grade of work your pupils can do?

Mr. Smith: By the quality of work already done.

Mr. Wright: Two of our students went into a cashier's box; two of our boys will go into a large bank when they graduate; some of our first year students were working in the stores at Christmas time.

Mr. Davis: One bank in our town employs four of our graduates. One graduate is head clerk in a railroad office. All our graduates are employed, earning from $75 to $100 per month.

Mr. Adams: We are dealing with boys and girls, not causes. The plan proposed by the president is right. If the pupil is compelled to leave school at the end of a year, he has something. If we can hold one boy one year by sacrificing our ideas, we should not hesitate to do so. We will then be fulfilling our mission.

Mr. Bainey: As to the four-years' course proposed by Principal Smith—what is done each year? Is the work of succeeding years simply an extension of the first?

Mr. Smith: Oral expression, free-hand drawing and gymnasium work every year. Special work of first year—English, algebra, shorthand, typewriting, civics (half-year), commercial arithmetic (half-year). Second year, shorthand, typewriting, English, algebra, English history. Third year,

decrease shorthand and typewriting, English, commercial geography, geometry, history full time. Fourth year, shorthand, typewriting, American history, civics, history of commerce, science, perhaps physics. Bookkeeping after first year.

Question: Does this plan cause loss of pupils early in the course?

Answer: We lose many after the first and second year. We keep some who would leave us under other conditions. Our aim is to give what the community wants.

OFFICERS FOR NEXT YEAR.

The Committee on Nominations submitted the following report, which was received and adopted, and the following officers declared elected:

President—Charles S. Davis, Steelton.

Vice-President—A. H. Welles, Central High School, Scranton.

Secretary—John B. Geissinger, DuBois.

Treasurer—B. S. Graham, Greensburg.

Executive Committee—Wm. L. Smith, Allegheny; Cheesman A. Herrick, Central High School, Philadelphia; P. M. Bullard, Williamsport, and F. L. Homer, Central High School, Pittsburg.

WEDNESDAY EVENING.

THE address of the evening on the subject, "Shifting Ideals and How to Meet Them," was by Dr. Edwin Erle Sparks, president of State College.

SHIFTING IDEALS AND HOW TO MEET THEM.

Mutation or change is an essential of growth and development; eternal sameness is stagnation; desire for improvement contemplates change, and the cardinal events in most lives are characterized by changes of location, of occupation, of surroundings and frequently of ideals. The man of business shifts the location of his shop in the hope of betterment, when reason says that he is no more likely to attract custom in his new store-room than in his old quarters. Instances may be cited where two men in the same line of business have exchanged store-rooms, animated by the hope springing eternal in the human breast. Changes of occupation are rare but not unusual. The old adage of a rolling stone and no moss is balanced by the equally time-honored saying that there is always better fishing on the other side of the stream.

Sentiment plays a large part in promoting marriages; especially in fiction; but a more rational if less attractive view includes the desire for change as a motive in a large number of matrimonial ventures. Fashions owe their existence almost wholly to changes and variations. The clothes-presses and garrets of every household pitifuly attest the fact that few articles of apparel are really worn out compared with the number cast aside because they are out of style. "To be out of fashion is the same as to be out of the world," is a familiar saying and a large part of the time of the average young woman is spent in making alterations and combinations, which will enable her to maintain her standing in both spheres—a task which is most cheerfully assumed in the case of the young man by his tailor and haberdasher.

The causes producing changes in fashions are frequently so remote as to be difficult to trace and so trivial as to verge upon the absurd. In 1900 the candidates for the presidency on the principal tickets wore smooth-shaven faces, and a wide-spread devastation of hirsute adornment followed. It was indeed a wise child in many cases who knew its own father. Soon afterward came a succession of presidents with short necks and the old-fashioned turnover collar which had been worn with a stock returned to that favor from which it had been banished thirty years before by a prince of England who endeavored to conceal an unusually long neck by a high stock or collar. Who shall deny that the present inverted bread-bowl of woman's headgear is but the pith helmet of the African hunter of big game, or that the multitudinous rodent supplements to the natural head covering is more than an attempt to make the hair fill the hat.

If these illustrations of the general law I am seeking to put into terms seem beneath the dignity of this significant occasion, let us turn to the so-called learned professions for further illustrations. Compare the present method of conducting cases at law with that of the old days of pleading before judge, jury and crowded court rooms.

The fervent oratory of Patrick Henry and of William Wirt which required no little beating of the breast and tousling of the hair in pleading a case has been ignominiously replaced by the typewriter who beats the kevs and tousels the spelling in a brief to be read by the judge at ease in his chambers. Barring the police court and the criminal court, the lawyer finds his time no longer occupied by the cry for personal justice but is employed in drawing up briefs, motions and demurrers involving the right to property and to invested interests. How does the specialist physician of the present day, maintaining an office down town with definite hours and reserving the remainder of his time for recreation, compare with the old general practitioner, called upon to heal all ills to which the human flesh is heir and subject to calls during every hour of the day and night; or contrast, as an illustration of the spirit of change, the pastor-preacher of a former time, expected to make a personal call upon every parishioner at frequent intervals and to hold service at least four nights a week, with the modern head of a great institutional church, having varied charitable interests and thousands of worshippers. His congregation in the good old days of disputation demanded lengthy sermons involving intricate theological complexities, but now they are more than satisfied with a thirty-minute discussion of

modern ethical, sociological and even political questions.

Having brought to your attention by these trivial illustrations what I call the universal law of change, let us apply it to the real subject of the hour—education. A lingering few of our grandfathers and grandmothers recall in memory the log school house, with its puncheon backless seats, its standing desk on pegs set into the wall where the writing lesson was performed; the erasers made of lamb's wool fastened around a block of wood; the broken chunks of chalk the forerunners of the modern crayon; and the entire school furniture arranged in a hollow square about a sheet-iron stove, alternately red-hot from over feeding or repellently cold from neglect. The country school house has been largely replaced in the present shifting from rural to urban life by the commodious, well-lighted and well-heated school buildings of the city and village or by the centralized township school to which the students are carried in public conveyances. In due time we may expect the sentimental little red school house (the realm of Ichabod Crane, the idle beggar sunning of Whittier), to be classed with the dodo as an extinct species. The old-fashioned pedagogue, frock-coated, long-haired, absent-minded, exists to-day only as "the burlesque Professor" in plays on the stage.

It is a truism that the old-time building, teacher, and course of study reflected the age in which they would be found as exactly as the modern types conform to the changed conditions of life. Education—its interpretation, its definition, its sphere, even its functions change and are changing daily.

The frequent change in the school curriculum, the subject of criticism, is only a necessary attempt to adjust education to the life of the people. The incessant changes in the latter I have already suggested; the changes in the former must be as endless. One can faintly imagine the criticism if the curriculum, the ideals, if the training of the schools should remain unchanged and unyielding to demand; of logic and rhetoric, each spelled with a final "k," still constituted the major studies; if, for instance, the electrician had not been evolved to meet the electric world, if the study of modern languages had not been introduced to prepare for the present interchange of nations; if the hand had not been trained to meet the demands of this industrial age. A noted speaker recently in a public address described a modern railway train speeding at a mile a minute, filled with passengers and flooded with electric light. Suddenly the cars were plunged into darkness by an accident to the dynamo. The wheels came to a sudden stop and the cry went forth "Where is the train electrician?" Education has met the want of the age and has produced the electrician; he was not needed for the days of candle light and stage coach trail. Human safety ranks beyond human happiness as a desirable factor of existence. Safety devices were not largely in demand by our slow-traveling and domestically-inclined forebears.

But when we know that nearly fourteen million people last year went to bed on Pullman cars, trusting to be carried long distances during the dark hours and to awake in safety, we appreciate the demand upon modern education for the invention and erection of the semaphors, targets, towers, switching devices and the countless automatic eyes which watch beside the tracks while we are carried swiftly in the helpless posture of slumber. The Wright Brothers are not college graduates, but they and all other pioneers of the air who may be adding rapidly to the history of transportation depend in their calculations upon the laws of physics, and the ascertained facts of meteorology which have been sought and worked out through modern education. An additional manifestation of this great law of mutation as well as an illustration of the desire of education to be up-to-date may be seen in the announcements, proceeding simultaneously from several institutions of higher learning, that departments of aviation are to be established. In them the young idea may be taught to soar where formerly it was taught to shoot and the young aviator may take practical advantage of the Emersonian advice, "Hitch thy wagon to a star."

May I again define education as a series of attempts to make the training fit the demands of the times. Herein lies to a large degree the secret of the marvelous growth of the modern state institutions, one of which is maintained in each state by the joint munificence of the Federal and State governments. Upwards of twenty of these universities and colleges now have more than one thousand students each, where hundreds of sectarian and private colleges older in years enroll less than one-half as many. But a comparison of the courses of study shows that the curriculum of the state institutions offers courses intended to fit young men and women for the present industrial age—courses in forestry, in all the various phases of engineering, in agriculture, in domestic science and art, in mining, horticulture, industrial chemistry, industrial art, machine design and the many ramifications of the industrial world. The sister institutions emphasize in their curricula the so-called cultural course—the languages, mathematics, literature, and the general sciences. Each has its distinct function to perform; each its call to service. Yet the one must be content to preserve the sacred ark of culture for the few where the other plans the way to a job for the many.

In all this change one recognizes the readiness of education to adapt itself to the needs of the times. The growth of the city gave birth to the sanitary engineer; the harnessing of the magnetic current to the electrical engineer; the utilization of water power to the hydraulic engineer; the growth of manufacturing plans to the industrial engineer. The necessity for preserving the remainder of our national resources has begotten the forester, not a mere wood-ranger or fire warden, but a trained expert in the planting, growth, cutting and preserving of trees, whose practical information is based upon the fundamental sciences of botany, chemistry, agronomy, biology, and the like. The increase of population and larger facilities for export transporta-

tion caused a demand for the scientific farmer, as manifestly as a consideration for health, domestic happiness and environment of the home created the school of domestic science and art. Schools designed to give to both young men and young women instruction along these and kindred practical lines almost unknown fifty years ago are now to be found in every state of the Union, supported by joint action of the state and the Federal governments. To the support of these so-called "land grant colleges," represented in this state by The Pennsylvania State College, the United States government gives nearly two million dollars each year. They enrolled about seventy thousand students last year in various courses leading to practical pursuits.

Now a college residence of four years, involving a loss of earning capacity and extra expense of maintenance, would naturally bar from its benefits many ambitious young people. How has this need of the people been met? It is worthy of note, as additional evidence of the free tender of education to the common people, that these state institutions offer free courses in agriculture involving a residence varying from two years to three months of which no less than six thousand farmers and farmers' sons availed themselves during the past year.

To work out these adaptations of modern education requires time, involves many errors, and calls for unlimited patience on the part of the public. To consider whether the world has gained or lost; whether in training the hand we have lost in mental power; whether in preparing for industrial pursuits we have commercialized learning, prostituted ideals, and added to the over-appreciation of money-getting, is beyond the province of this paper. Indeed whether we have lowered the high ideal of a life of service,—extending perhaps to all eternity—omitted the moral and spiritual sentiments aroused by the studies of the old curriculum, or lost the character-forming contact of teacher and student as exemplified by Garfield sitting on a log with Mark Hopkins—to consider this aspect would prolong the hour to unbearable length.

The thought is rather that our problems in education arise from this necessity of adaptation, and that to get an exact estimate of our progress or retrogression we must take into account the tendencies of the times, the spirit of the age. No task is more difficult than for a people to define the age in which they live. Current events do not always become history. To illustrate, a visitor in the city of Washington inquired of a true artist how to get a proper view of the Congressional Library, "Step back a thousand paces and look forward fifty years" was the reply.

Perhaps we shall all agree that the tendency of the times might be summed up in the general demand to "do something." Just prior to the last presidential election one of the prospective candidates for the nomination visited a large college; three thousand students hailed him unroariously in the college fashion as the next president. He began his speech with a tribute to education, followed by a eulogy of the university whose constituents he was addressing; next he turned aside to eulogize the public press and thence to a grandiloquent flight on the benefits of the church; in conclusion, he thanked the students from the profound depths of a deep heart for their manifestations of good-will, etc., and sat down amidst an enthusiasm which, manufactured to meet the occasion, had grown feebler and feebler under the flow of words until it was represented by only a few embers.

Twenty years before the effort would have been hailed as an ideal speech, a flight of oratory, indicative of a great statesman; but times had changed. The students were right at heart; their first enthusiasm was honest, but they listened in vain as the speech proceeded to hear what this tall man intended to do after he became president of the United States; what corporations he proposed to regulate; what trusts to "bust," and what animals he proposed to hunt; from his remarks the students were unable to determine whether he was devoted to tennis or to golf; whether he was fond of bear or 'possum; whether he used the upper cut in boxing or a half-Nelson in wrestling, and they were disappointed. The word was quietly passed around that as a possible candidate he was "no good," that under his administration there would be "nothing doing" and that under some circumstances he might even go the length of showing a streak of yellow.

Ideals of statesmen have changed and ideals of scholarship as well. The pale and wan student burning the midnight oil is as rare a sight as a professor of Greek or a debating society. This is the "rah rah" age of student life and to ignore it, to dispute it, or to try to withstand it is idle. The average boy looks forward to going to the fitting school and to college as a natural result of being born; it stands to him as a period of life, a passing experience, a journey through an unknown and pleasing country.

One of the best cartoons appearing on the proposition to supplement the interchange of professors between the colleges of the Old and the New Worlds pictured the invasion of a quiet, orderly field of England by a horde of rah-rahing Comanches from America with megaphones, serpentine dances, banners, songs and kindred ear-splitting accompaniments of an American football game. "My eye!" exclaims the English lad in open-mouthed astonishment.

The high school or college boy, generally speaking, is not disposed to take his work seriously. "Never let your studies interfere with your education" is the maxim with which he greets the long holiday of school life; great-hearted, manly, doer of valiant deeds, he looks at life in the large and scorns petty details. Whether his tie, his hose, his handkerchief and hat band match is of greater consequence to him than solving equations, drawing a map of Caesar's route or conjugating French verbs. He sees himself pictured in all his sartorial glory on huge posters; he finds his pranks illustrated in the periodicals and he is the subject of plays on the stage and the hero of books of fiction. As a public

entertainer he is constantly in the public eye. Athletic games, theatricals, glee club concerts, negro minstrel performances, class rushes, bowl fights—in countless ways the school boy and college boy is the public entertainer and the benefactor of delighted audiences who pay to see him perform. In all this he is not to blame; he is simply acting his part in an amusement-loving age. "Do you know Homer?"

Nor does the school and college girl fail to reflect the spirit of the age. Recently I looked over an advertisement of a girls' school in which the preceptress offered the following criterions, viz., correct manners, to be agreeable in society and respectful at home; literature for the mental training and poetry as a vent for the female emotions; also sewing and embroidery. Think of that course of study for Bryn Mawr or Vassar! One can see the delicate school girls destined to be our grandmothers mincing in gait, simpering in manners, overcome with false modesty, spending hours over a useless sampler and trained to become the plaything but never the playmate of man. With this advertisement fresh in my mind I chanced to be on a railway train which took up at a way station a basket-ball team of high school girls. Their fellows had accompanied them to the station to give them a send-off as one expressed it; and a jolly crowd they appeared, bare-headed, bare-armed, vociferous, rejoicing in young animal spirits. As the train departed, they gave advice how to treat the opposing team by chanting in unison, "Give them the axe, in the neck!" What would a school girl who was taught poetry as a vent to the female emotions think of this modern method of venting the feminine emotions?

As a further example of the shifting of ideals, compare the home-going of a victorious debating team in such institutions as they yet exist with that of a victorious athletic team. Rarely are the former carried on the shoulders of their fellows or drawn by hand in triumphant chariots through the streets. Yet what person of mature and sound judgment, what person who in his school days experienced the benefits derived from the literary or debating society would rank athletic sports with public speaking as a training for usefulness in life? The old college literary society is well-nigh extinct,—it died of too much "hops," including two-steps; debating clubs still exist in some institutions, but by heavy subsidies in the form of prizes. Compare the eagerness with which boys strive to get on the debating team with their efforts to make the football team. Has any high school or college developed a training table for a debating team? Will any one exchange the gate receipts of a football team for the receipts at a debate, if by any chance an admission fee is charged?

I deplore perhaps most of all the unfortunate shifting of ideals that is to be found in our playing. Time was when we played for the sake of playing, for the pleasure of personal participation; for the sensation of a vigorous blood circulation and the exhilaration of deep breathing—indeed, for the pure joy of living. Such play extended from the kindergarten to the Senior class in college. In my day, before the modern game was developed, I have seen fifty romping college boys kicking a football about a field, neither hampered by any rules, not rendered anxious by any training, possessing no skill and fearing no broken bones—playing for the pure love of playing—it was anybody's ball who could get it. Where now is the college man, the high school boy or even the mature grammar lad who would consent to engage in such *unorganized* play, unless in order to practice a few minutes before the team lines up? The player is now a part of a great machine, his individuality crushed under set rules, his exuberant pleasure lost in a stoic attitude of playing; he is not out to play; he is out to win. He no longer g-a-m-b-o-l-s; only too frequently he now g-a-m-b-l-e-s.

Last spring in the country I came upon a little school-house nestling in a scattered maple grove at the crossing of the roads and in a small open space where the boys and girls and even the teacher engaged in a game of ball fresh in my boyhood recollection and possessing the incongruous name of "one old cat." Here were no two opposing sides drawn up in deadly warfare; no headgear, no applauding thousands, no head coaches, no training, nothing but play. Each batter was in until he was out! and there was the end of it, playing for the very love of playing. Once again I thanked God for the saving grace of country life; for a place where boys and girls could afford to be natural; where they did not deem it essential to pose.

So much for the conditions which confront us; the vision of Things as They Are. Casabianca is laid away in the moth balls. Any idiot who would stand on a deck and let himself be burned to a crisp simply because his father told him to stay there would be pronounced, "Cherry ripe for the bug house." A lad who would take the time to untie the packthread about a bundle in order to save the twine—according to the anecdote in the old McGuffey's Fifth Reader—would stand small chance in these hurry and waste days to get a job from his watchful employer. Yet, I would not say with Hamlet,

"The time is out of joint. Oh, cursed spite
That ever I was born to set it right!"

I have but few remedies. I find it far easier to describe the conditions, than to prescribe the remedy. But first I would try to approach the boy and girl in the spirit of the times.

Investigators into the science of fundamental paideutics have remarked upon the similarity of standards among adults of primitive people and the immature minds among savage nations. The savage, for instance, is a communist so far as food in time of necessity is concerned. In midwinter if he chances upon his neighbor's cache of food he satisfies his hunger and preserves his life; and he grants the same privilege to his neighbor so far as his own store of food is concerned. Under this standard the word "thief" and "theft" never enter the vocab-

ulary of the savage. Yet no sooner does the civilized man come to dwell as neighbor to the savage, bringing with him the idea of individual property and the right to exclusive use, then communism in the red man becomes theft or beggary in the opinion of the white. There is honor on the part of each; simply the standards are different. So greatly do the standards of honor differ between immaturity and maturity in civilized society.

Before Judge Mack of Chicago, Judge Ben Lindsey of Denver, and other justices, who mingle a large degree of common sense with their legal law, began the study of the code of honor among youthful delinquents of the cities, magistrates had either been applying to boys or girls the punishment prescribed for adult violators of the law, sentencing them to prison where they became schooled and skilled criminals, or weakly pardoning them and setting them free to commit further crime. Usually the justice was exasperated with the youthful prisoner because he lied to avoid the punishment of himself and his accomplices in crime or because he refused to inform on them. Only when certain judges came to study the ideal of the boy and to investigate his code of honor did they realize that the code recognized one supreme standard and one supreme breach of faith—the one was to be faithful to a companion, and the other was to "switch," meaning to tell upon the accomplice. Reorganizing the treatment of cases on this new basis of honor, and introducing the parole as a means of readjusting and strengthening the boy's sense of honor, we have the Juvenile Court of to-day and its code of practice as the result. What is the essential difference between the past and present practice? Simply an attempt on the part of maturity to put itself into sympathy with youth, to comprehend its ideals, its standards, and its thoughts.

The code of the school boy is as surely existent and as carefully defined although not so lawless as the code of the boy of the slums. One comes upon this code in unexpected places. Recently within the experience of the writer, a teacher of drawing complained in distress of the absence of a large proportion of his class and the prospect of ultimate failure on the part of a large percentage of them. As a remedy the writer suggested that the drawing rooms be kept open on Thanksgiving Day and on Saturday afternoons, both being holidays, for the purpose of permitting work over-time by the delinquents. A notice was posted calling attention to this opportunity for bringing up back work and public announcement was made of this means of saving grace. On one of the notices posted on a bulletin board some fellow had registered his protest against this attempt on the part of the school authorities to violate a fundamental principle of the school-boy code. He voiced his protest in one plain but unmistakable sentence of three words, "We won't scab." What adult mind would have connected a demand for work outside hours with the principle of organized labor? The adult saw only the chances of retrieving lost opportunity; the boy measured the amount of time he must give as his laboring hours. His younger brother in the lower rounds of the intellectual ladder under the eye of the teacher is "kept in" and compelled to scab willy nilly; but it is doubtful whether he views with more equanimity the system or whether he is more morally impressed by it than his elder college brother.

The boy in many of his actions and thoughts is right—from his point of view and according to his standards. The instructor is by the nature of his position, and sometimes by temperament and choice, on the opposite side. He knows that to admit argument tends to impair authority. Far be it from me to suggest temporizing in a crisis or to relieve the boy from the duty of obedience; but I suggest the wisdom and benefit of a little study of the case by the instructor, after willingness to obey has been indicated, such study to weigh and consider the merits of the case from the point of view of the boy. It is sometimes surprising to learn how much of worth can be found on the other side in moments of calm reflection after self-induced heat has subsided. Especially is this true when the case involves a suppression or deprivation of a right or a pleasure without providing a substitute.

From personal experience may the writer illustrate his point? The gymnasium was being abused by students from sitting in the windows and upon the apparatus. *Remedy*—Place a strip of spiked iron along the window sill or remove the apparatus to another room. *Result*—Loud protest and investigation. The latter revealed the fact that a series of basketball games was being played in the gymnasium and that the spectators had been seated in the windows and on the apparatus simply because there was no other place to sit. *Second remedy*—The erection of a row of temporary bleachers, if the term may be applied to seats where the spectator is bleached by artificial rather than natural light. *Second result*—Contentment and happiness and the winning sense of a "square deal."

May another instance be summoned from subjective experience, being one chapter in a future autobiography to be entitled "Mistakes of a School-Master?" Saturday night naturally a free night in all colleges had become a time of disorder verging in some instances close upon debauchery. What was the natural remedy from the viewpoint of authority? To ascertain the names of the offenders, to punish them, and to assess damage to college property on the student body. What was the natural result? The introduction of an irritating espionage which in the student's mind speedily became a part of the hated "spy system"; encouragement to deception and hoodwinking; a police court each Monday morning; and the disappearance of faculty attention to studies in a rising tide of discipline. Reason and argument prevailed not against the assumed laws of personal liberty. After a few weeks of deadlock those in authority began to see that the Saturday night disorder, justified according to student code, was not the result of inherent lawlessness, studied defiance, or moral depravity; but of

too much freedom, too much unemployed time, and uncertain sources of amusement. As a substitute, a course of illustrated lectures and light entertainment was provided. Every Saturday night there was something to do and the disorder well-nigh disappeared. The shifting ideal of youth had been met by the common sense of maturity.

We must especially take into consideration the problems presented by the growing solidarity of the schools, the increasing numbers and the primitive underlying force of gregariousness. It is a sad commentary on the teaching profession that while we have been able to adjust the course of study to the requirements of the time, to equip laboratories and shops for the training of the hand, we have made small progress in understanding controlling, and regulating properly the *social* life of the student. And there is daily more demand for such sympathetic control, because daily we are giving over to the schools more of the functions formerly exercised by the homes. We scarcely as yet realize the import of this paternalistic tendency. First the home tutor was abandoned for the public school teacher in the common branches. Next the higher education passed from the parental roof. Professional schools were substituted for courses of study in the lawyer's office or physician's office. By and by manual training in the schools replaced father's workbench at home and lessons in domestic science relieved the mother from instructing the daughter in cooking, sewing, and mending.

In many families religious instruction is decreasing and being entrusted to the schools. The ties of family life are slowly waning in these days of small families, of travel, of club life, of amusement-seeking and of business absorption. The social functions formerly exercised by parents is thus forced upon the schools. And we must meet them sympathetically, patiently, and with good judgment. The high school fraternity is an evil springing out of modern conditions. There is too much money, too much leisure, too much idle time aping college life.

Is it the fault of the boy that the reading of good literature, of the classics, if you please, has waned in the presence of the ten-cent magazine and the light periodical? Must the boy be blamed for lowering his ideal of the respect due to age and standing when the comic supplement of the Sunday newspaper, the low water-mark of human intelligence, pictures all sorts of pranks played by children upon their elders and especially those played upon the teacher? Compare the influence on the boy of the series of articles recently appearing in one of the most widely-circulated cheap papers in the United States, purporting to represent school-boy life at Lawrenceville, a series of cheap school-boy jokes perpetrated on the masters, or showing the boy as a greedy animal cheating the vender of pastry. Compare the influence of these stories, largely read by tens of thousands of boys, with the influence likely to be exerted by that classic of the English speech, that picture of the chivalric, high-minded, gentle-born lad of Old England, "Tom Brown of Rugby"!

The same paper has been running recently a so-called story of college life, in which brutality in sports and fraternity initiations is depicted in attractive lights, hazing upheld, and fraud and deception practiced upon teachers is justified. Even so solemn a thing as a funeral is turned to ludicrous account in a supposedly-funny college prank.

Both boy and girl will appear in true light if judged by their age. Clamorous, riotous in pure exuberance of spirits, loyal to his ideals, strong-backed, brown-handed, easily led if understood—I don't know where you may find a more loving animal than the American school boy. Juno-like in her majestic gait, the mother of a strong race, frank-eyed, confiding, fellow and goddess to her companion, where will you find a more lovable, and adorable being than the average school-girl of America?

While urging an attempt to put ourselves into touch with the spirit of the times I would not for an instant counsel abandoning the old ideals. By and by we shall change. By and by the pendulum will swing the other way. The time will come again when boys will choose a college because it offers a good course of study taught by able instructors and not because it happened to put a good football team into the field the preceding year. By and by the high school will not measure its success by the wide range of subjects it announces in its course of study nor by attempting college work with immature students and inadequate equipment, but by thoroughly preparing nine-tenths of its constituents in the few fundamental subjects essential to service in the stations to which they will be called and the one-tenth in the more complex subjects necessary to pursuing a higher education.

When the millennium arrives the old ideals will be summoned to life. Heroes of peace will successfully compete with heroes of war, and the "get there" policy will disappear before the higher ideal of merit and constancy. Economy will again become a virtue and extortion of wages by combined force will give way to an effort to increase individual efficiency.

To that end let us all, as bearers of the sacred ark of character-forming, strive with understanding, with sympathy, with persistence and with faith.

THURSDAY MORNING.

THE Department convened at 9:30 a. m. when Supt. E. M. Phillips, of Albert Lea, Minnesota, president of the Minnesota State Educational Association, read the following paper on "What State Inspection Has Done and Is Doing for the Schools of Minnesota."

RESULTS OF STATE INSPECTION.

I shall endeavor to touch only the most salient points in the discussion of state inspec-

tion in Minnesota. My question makes necessary an apparent laudation of our system. To offset this let me say that if our high school plan has merit it is just because we have been ready to see good in the plans of other states and to incorporate this good into our own system. Moreover, I came to Pennsylvania confidently expecting to learn much from you and I am not disappointed. We are struggling with big problems ourselves and we are drawing upon you of the older states for help. In the midst of so much that is new we find it difficult always to distinguish between the fundamentally sound and the fundamentally sensational. Beset with attacks upon the old standards in education we aim to keep all that is worthy while we move cautiously toward the new.

The present plan of state high school inspection in Minnesota has been in operation for sixteen years. During this entire period the work has been in the hands of one and the same man. To discuss the subject without reference to this fact would be to attempt a syllogism without the major premise. I am forbidden both by the occasion and the modesty of the state inspector to indulge in eulogy. Yet it is patent that the personal factor cannot be excluded from this discussion.

Origin of State Inspection.—Our public high school is as much a product of evolution as yours. The state constitution, while it contained provisions for elementary and higher education, made no reference whatever to secondary schools. The private preparatory school held this entire field in the early sixties. And these schools were very jealous of their prerogative of fitting pupils for college. In the denser centers of population the curriculum of the common school was sometimes extended beyond the common branches into the field of preparatory subjects. But the opportunities thus afforded were strictly confined to urban communities. For the ambitious youth of the rural districts the private academy offered the only route to the university. And this was expensive, almost prohibitive, in the early days of statehood. The broad-minded, progressive men who fathered the university determined to make a way by which higher education should be accessible to every boy and girl in the state. A bill was drafted by the president of the university and passed by the legislature in 1878 which provided a subsidy of $400 for schools in villages and cities establishing high schools and complying with certain requirements. These schools must maintain courses of study meeting the university requirements for admission. They must be open without tuition to any pupil in the state. The measure also created a state high school board consisting at first of the governor, the president of the university and the state superintendent of public instruction. Upon this board was conferred extensive discretionary powers with reference to the management and equipment of the subsidized schools. The law logically provided for the inspection of these schools by the members of the board. Under the encouragement of this act the number of subsidized schools rapidly increased, and personal inspection by the board soon became a physical impossibility. Much of the work was delegated to the members of the university faculty. The consequent evils who can describe? Its only excuse could be to assist in making the preparatory function more effective. In this even it failed. And it strongly tended to deprive the local high school of all its community value as a school of last resort. Further comment is unnecessary. In 1893 the act was so amended as to provide for a salaried high school inspector to be appointed by and to serve at the pleasure of the State High School Board.

Systematic Inspection.—Prof. George B. Aiton, a public school educator of wide experience, was appointed to undertake this important work. With this appointment we entered upon a new regime in secondary education. The board laid down very definite rules directing his work. The following will show their general purport:

"A general supervision of all that pertains to the growth and efficiency of state high schools, and to the plans of administration, inspection, and the reports of these schools to the state board.

"A visitation to each of these schools for the purpose of knowing the present condition and of making suggestions to the teachers and boards of education of any matters of instruction, organization or equipment that will be for the improvement of the school.

"To report upon the applications of other graded schools desiring to be received under the inspection of the board.

"To keep record of the condition of the schools, and to make report to this board of condition of the schools and recommendation for promotion or the reverse; recommendations made to local boards; recommendation for acceptance under the supervision of the state board; compilation of statistics for report to the legislature."

Mr. Aiton brought to his work a very definite purpose. The high schools up to this time under state control had been mere preparatory schools. It was to be his task to maintain this function and to add to it that of suitable training for worthy citizenship those who were never to reach the higher school. He first laid down the following conditions as necessary for a successful high school: A population of not less than 1,000. Four graded rooms below the high school. High school quarters consisting of at least a main room, a large recitation room and an office. An assessed valuation of not less than $200,000. A well-qualified superintendent starting at not less than $900. A well-educated assistant in charge of the main room. Suitable equipment, including libraries, laboratories and general apparatus.

All this seems trite viewed from present day standards, but it was this very definiteness and detail in the early years of high school inspection which has made possible whatever of development and excellence the high schools of Minnesota may now be found to possess.

Individual boards of education and individual superintendents were not wanting who

squirmed under this very intimate direction of community affairs. But the inspector was responsible alone to the appointing board. He slashed at cherished community ideals if he had to, and he said his say without fear of any man. It was his to create and then to maintain a sane high school attitude on the part of boards of education, superintendents and instructors, and to rightly interpret to all these factors the best to be found in secondary education at home or abroad. It must not be inferred that this work was done, or indeed could be done, by an autocrat—at least not in Minnesota. The entire history of high school development has, with us, been that of hearty co-operation between high school and university authorities and the state inspector. He has been the leader—forceful, resourceful, alert, aggressive—whose plans the other agencies of local and state activity have been glad to interpret and advance within their own fields of influence.

My problem is to tell you what state inspection has done and is doing for the high schools of Minnesota. The task is not altogether an easy one in view of the fact that we have appropriated so freely from the experience and the experiments of other states and countries. I cannot expect to be free from the charge of claiming for our system of inspection many good things which are the result of this common experience and which are, accordingly, a part of the common heritage. And in reply to this charge nothing can be said except to aver an honest intention to "stick to the text."

What State Inspection has Done.—For the year of 1894–5, or the first year of state inspection, the entire number of high schools in the state was 86; the number of pupils, 9,402; the number of graduates, 953. For the year 1908–09, or the last year covered by the reports, the number of high schools is 206; the number of pupils, 26,583; the number of graduates, 3,533. Thus in fourteen years under state inspection the number of schools has increased nearly threefold, the number of pupils about the same, and the number of graduates almost fourfold. During the same period the population of the state has increased a little over one-third. You will agree that this is a phenomenal record even for a rapidly developing western state. It may be added that the sparsely settled northern counties are not without high schools. Indeed, only four counties are without them. It has come to mean much to us that our boys and girls from the most isolated farms are within easy reach of an education adequately fitting them for the performance of their duties as intelligent citizens or opening the way to a higher education.

It would be unfair to attribute this condition solely to state inspection. It is certainly due in large measure to state subsidy. But the subsidizing policy is so intimately connected with and so largely the result of successful inspection as to make the two inseparable for the purposes of this discussion. The first state aid of $400 preceded the present plan of inspection by eighteen years. During this period the increase in the number of high schools barely kept pace with the increase in population. The unprecedented popularity of the high school as a state institution began in 1893 under state inspection and without increase in subsidy. Five years later, upon the initiative of the inspector, backed by the press and the local school authorities, this subsidy was increased to $800, then in 1900 to $1,000, in 1902 to $1,500, in 1906 to $1,600 and in 1908 to $1,750. And it is noteworthy that this has been done by successive legislatures not always liberal with the university and other worthy interests. It all points to the fact that the people of the state have a wholesome confidence in the efficiency of our state inspected high schools. Inspector Aiton says in his report for 1904: "State aid to high schools is not pauperizing the high school towns. There is not the slightest apparent tendency to fall back on the state and stop when the state money gives out. So far as I can follow the influence of a cash bonus for high school work in the small town, it operates in the way aid was intended to act, in begetting a spirit of cheerful expenditure. 'Now we can have as good a school as any town. Now we shall not have to lose our best teachers. Now we can pay better salaries. Now we can put more of our money into the grades.' These are the sentiments that come to my ear wherever I go. If the public school spirit, the willingness to spend money, and the conditions that prevail in the smaller towns on our high school list can be duplicated in the corresponding towns of any other commonwealth at home or abroad, I shall be happy to write a letter of congratulation to those who have the pleasure of visiting and co-operating under such favorable circumstances."

These are vigorous words. But they come from one who weighs his words, and conditions throughout the state to-day give them generous backing. The schools have steadily advanced in number and popularity ever since they were written five years ago. The increase in state aid has kept even pace, and the part which state inspection is believed to play in the progress of the schools is shown in the appointment of an inspector of graded schools, and more recently, the appointment of an assistant, and all to the end that the work of inspection may be more thoroughly done. State inspection has unquestionably been an effective agency for the advancement of teachers' salaries. The requirement that the salaries of superintendents of schools receiving the subsidy should not be less than $900 seems to-day very conservative. But in 1893 we find that many of the smaller towns were paying as little as $700. The ruling of the inspector withheld from them both subsidy and state recognition until they met the requirement. With this alternative, salaries were advanced without delay. But the best of it is that this had a bullish effect upon the whole market. Stocks advanced all along the line. Not even the financial crisis of 1894–95, when salaries were generally so savagely slashed, had a depressing effect upon teachers' salaries in Minnesota. I recall one case at that time when a superintendent felt

impelled to decline an increase from $2,000 to $2,200. As an event unique in the history of school economics it deserves to be made a matter of record. I refer to it to show the tendency in the state. Nor has this attitude changed in the intervening years. While the remuneration of teachers in Minnesota, as elsewhere, is inadequate, our salaries will yet bear comparison with other states, and this is particularly true of high and graded schools where the influence of state inspection has been operative. Side by side with the fairly liberal salaries paid to the teachers in our villages and cities are the miserable pittances dealt out in our rural schools. Something has been done for the amelioration of this condition and more is contemplated. It is noteworthy that intelligent and organized activity for increasing the salaries of rural school teachers has its origin in the inspection department.

A very noticeable characteristic of our high schools is the almost universal attitude of the graduates toward higher education. The college spirit is very strong. The unwonted growth of the university and of the smaller colleges as well bears witness to the fact. I have rarely known a boy or girl approach the close of the last high school year without a well-defined ambition for higher education. It may be that in individual cases this ambition is lamentable. "Some minds," it is said, "are like a Scotch farm—poor by nature, and ruined by cultivation." But generally speaking, this characteristic will be conceded to be desirable. It may safely be asserted that we owe it to the cordial understanding brought about by state inspection between the high schools and the colleges, And this brings us to a discussion of the Minnesota State High School Board Examination System. I am to chant its requiem. As a vital part of our educational plan "it was." Examinations are still offered, but not, as once, required of accredited schools. For a very few purposes state high school board certificates, issued upon the successful completion of these examinations, and in particular subjects, have legal validity. The College of Engineering at the university continues to demand these certificates in high school mathematics in lieu of entrance examinations. But elsewhere the diploma of any high school in the state entitles the holder to all the privileges and immunities of the possessor of a *de luxe* edition of state high school board certificates. The certificate of the high school principal to the completion of any subject is accepted by any college in the north central college association in lieu of entrance examination in that subject. And yet it was not always thus. There was a time when this same examination system was a power to be dealt with and to be feared. Pupils, teachers and even superintendents slept only to dream of it, and waked in terror to conspire against it. They sometimes went so far as to take sly peeps into the sealed packages of questions before the day set for the slaughter. And even after the fatal day many filed away the precious questions as a rich legacy to be used in drilling for the next battle. You know the futility of it all as we came to know it. But release from this stultifying system came through state inspection. The inspector said to the institutions of higher learning, "We are constantly improving the personnel of our high school instructorship. The certificate of the principal is a better guaranty of efficiency in any subject than the passing of a state examination. Put the responsibility upon the principal. If the results do not justify the change, it will be time enough to search for a better remedy than the present enforced system of state examinations." The plan has been in operation long enough to justify a conclusion. And the conclusion is shown in this: The university requires for admission the principal's certificate for the completion of four years of English, one year of elementary algebra and one year of plane geometry, together with nine other year credits to be chosen from a list so long that I have not the courage to present it. Whenever the high school authorities have agreed to additions to this list they have always succeeded in getting them. The university, of course, reserves the right to disqualify any student thus admitted who fails to maintain class rank. If one reflects upon it, they probably always exercised that prerogative, and so the reservation was not important to the high schools. There have been times when they have rejected many. Generally this has come with a spasmodic tightening of the reins, and has admittedly been the outcome of purely resident conditions rather than lack of preparation. The university authorities are quite well agreed that little has been lost on the one hand and much gained on the other by doing away with the old plan of requiring the presentation of state high school board certificates in lieu of entrance examinations, and placing the responsibility of thorough preparation upon the high school management, where it belongs. The state examination system in ante-inspection days did a good work as a unifying influence. It might be added that in the early period of state inspection it served a purpose in helping to establish standards in subject-matter and instruction. But the continuance of thorough inspection seems to have rendered it of only incidental value. Our schools are keeping pace, without it, with the most advanced standards, both in curriculum and quality of work.

For a young state Minnesota holds to high professional standards. Through statutory provisions and State High School Board rulings, the requirements for certification are being steadily advanced. At first the holder of a county first-grade certificate was legally qualified for high school work. Now a high school instructor must hold a professional state certificate, granted only to those passing a most rigid state examination, or to college graduates after two years of probation, or to certified graduates of the College of Education at the university. There is a marked tendency toward a standard of professional training for all high school instructors. The College of Education, founded for the express purpose of providing such training, is still,

perhaps, in the experimental stage. The legislature has been tardy in providing this department with needed buildings and equipment, but the practice school is well established and gives promise of affording valuable experience to its students as a preliminary to independent teaching. If I have rightly interpreted the signs, the time is not distant when the aspirant for a high school position must add to his college training a distinctly professional course. Already the salaries paid to young teachers with such training are a third higher than those paid to the professionally untrained. Inspection passes along the word from school to school that professional training is a profitable commodity for both the school and the teacher to invest in. So soon as it can be done without a dearth of teachers, inspection will urge and secure legislation requiring professional training for all high school teachers.

In the matter of securing good buildings, state inspection has had the opportunity to be very influential. Reference to the annual reports will show that every one of these opportunities has been improved. In this form of activity as in many others the inspector has made suitable use of community pride. In his peregrinations he has carried from one town to another the gospel of sensible school architecture. He has said to the board of education and the superintendent in the village of A——, where the high school building is antiquated and inadequate, "The neighboring village of B—— is erecting a fine school building. The grounds are extensive, the site is central and elevated and shows off the building to good advantage. The building itself is commodious in plan and is to be lighted, heated and ventilated according to the most modern ideas. It will pay you to see it. The board feared that the people would not vote bonds. But it was accomplished without difficulty, for people are coming to believe that it pays to properly house their high schools." Then follows a conference in which the inspector is the important factor. He can tell them what a modern building, adequate for their needs, will cost. He can advise them with reference to building material, architect, superintendent of construction, legal procedure, and so on to the end of the chapter. For in his years of service he has made himself a specialist in all these matters. Thus inspired and thus assisted, many districts have erected creditable structures, when without such help, they would either have done nothing for years, or have squandered public money in misdirected efforts. If the cities and villages of Minnesota have made an unusual showing in public school buildings, it is easy to see that state inspection has had a hand in it.

There was, for a number of years, a disposition on the part of school authorities and aspirants for positions, to use the inspector's office as a teacher's agency. As the inspector had to be considered in such an arrangement in order to make it a success, the tendency fell just a little short of a well-developed and perfectly working system, because of the inspector's lack of hearty co-operation. And yet it is not likely, that out of any ten places electing new superintendents last year, more than one or two of them made their choice without consulting the inspector. He is always willing to name a list of available men for any position, but I have never known him to urge the election of a particular man. On the other hand he has had the courage to tell a board of education of the entire unfitness of particular candidates, and this whether the lack was professional or moral. He has been known to do this without waiting for an invitation. The outcome is a clean and efficient superintendency for the state, limited only in its possibilities of improvement by the wisdom of the inspector and the liberality of local boards of education.

Improvement in local administration has brought with it better instruction and a judicious shaping of the courses of study. The inspector has insisted that the superintendent should be an administrative officer. In the average high school in medium sized villages and small cities, which I have in mind throughout this discussion, it was the common thing, before the period of state inspection, for the superintendent to devote all or nearly all of his time during school hours to class-room instruction. Sometimes he did so from choice, but oftener under local compulsion. The inspector urged superintendents and boards of education to discontinue the practice. To-day it is a rare thing to find a superintendent in the smallest high school town who does not give a good part of his time to supervision. In systems where the high school enrollment is over one hundred the class-room work of the superintendent is purely incidental. The present standard requires that the superintendent shall employ his time in keeping in touch with the character of the work done in every department of his school, and that he be able to pass intelligent judgment upon the value of the services of any teacher at any time. Moreover, there is a growing tendency to look upon the superintendent as the real head of the local institution. In all questions which directly pertain to the management of his school he is the arbiter. He selects the texts and employs the teachers, even though the law vests this power in the board of education. His advice is paramount in the matter of teachers' salaries. He is usually on the budget committee and his recommendations here are carefully weighed. In a word, the superintendent is "it" so long as he makes good. Add to this the influence exerted by the inspector for a longer tenure of office and better salaries for superintendents, and we have, I believe, the best of what state inspection has done for Minnesota high schools.

There is another characteristic feature of the high school situation in Minnesota which I believe is noteworthy. It is the excellent quality of the work done in the small schools. It might not be fair to say that it is uniformly better than that done in the large schools, though at this safe distance from home, I may, perhaps, say with impunity that I believe it is so. A plan at present in operation in the state provides that the university authorities

shall promptly report to the high schools the list of their graduates who fail to maintain class rank at the university. I have yet to see a list showing the failure of any graduate of a small high school. Most of those dropped for class failure come from the rather large systems. We must attribute a good part of this to the numerous distractions which city life offers as compared with country life. We must add to this that the best brains as well as the best brawn furnished to our civilization still comes from the country, and the small high school draws largely upon the rural districts for its students. But these conditions are of national extent, and in no sense peculiar to Minnesota.

I believe there is another element of influence co-operative for high standards of work in our small accredited high schools. State inspection means much more to them than to the large system. The approval of the inspector is not only a matter of local pride, and that counts for much—but his approval is necessary in order to secure the state aid, and this is indeed a vitally important thing to those communities that are heavily taxing themselves for the maintenance of a high school. Inspection and the state subsidy have together actually doubled the number of efficient high schools in Minnesota.

The System.—But, you will ask, What about the *system* in Minnesota? Are not procrustean methods in vogue to secure conformity to a centralized authority? Are there not iron-clad courses of study and of general procedure dictated by the central machine? There was a time during the early years of state inspection when the curriculum was a matter of much concern to the state inspector. He devoted himself to establishing relative values, and insisted upon certain subjects as the nuclei of a secondary education. The absolute chaos then prevailing rendered this course imperative. This accomplished, his activity with reference to the curriculum has been confined to suggestions in the way of interpreting the most advanced ideas of all the states upon the subject-matter of secondary education. No one can say that the inspector has forced upon the schools any of the newer subjects now offered in the high schools. Rather, he has carefully discussed with local authorities the question of the place of industrial training in the public schools, and has counseled them to be cautious in following the extreme views of the faddist and the young enthusiast. Thus we are indebted to high school inspection almost as much for what we have *not* as for what we *have* in our courses of study. And this leads to the second division of my subject.

What State Inspection is Doing.—If ever there was a time when educational ideals needed hoppling over night, that time is now. It is not that we need to fear the new ideals that are flooding in upon us. But it has taken too long to build what we have to let it all be swept away and replaced by we know not what. Presumably Minnesota is not different from other states in respect to the large number of experienced educators who are leaving the work for other fields, and the consequent large number of young and inexperienced men who are taking their places. To the young man the new and the sensational are apt to loom big on the horizon. The old and tried, good or bad, has little hold upon him, and its real worth is always in danger, in his hands, of being hastily weighed and lightly cast aside. It is just here that state inspection is doing its best service for us to-day. We are proud of the perfect freedom enjoyed by local authorities in shaping coures of study in accordance with local needs. We rejoice in the fact that our high schools are not the tail to the university's kite. We point with satisfaction to the lack of absolute uniformity in the curricula of our secondary schools. But for all this there is *unity* in the Minnesota system. And this unity comes through state inspection. The new ideas in secondary education are quite as prominently recognized there as elsewhere. But inspection has operated to bring about a sane adaptation of these ideas to conditions that already exist. I shall close the discussion with one illustration.

Minnesota is decidedly an agricultural state. From the very nature of things, our state school and college of agriculture, even with the aid of several experiment stations scattered over the state, could not reach an appreciable number of the young people for whom such training was desirable. Two years ago three local high schools introduced elementary courses in agriculture. The inspector watched the experiment and studied the whole question thoroughly. The legislators of the session of 1909 announced that they had been "seein' things," and their vision made them believe that agricultural education should be encouraged in the people's schools. As the matter began to take definite form, there were two very different bills introduced to this end. The first measure proposed the creation of an entirely separate system of schools to be known as county agricultural high schools. They were to be similar to the schools of the same name in Wisconsin, training the youth in the rural districts for industrial pursuits and for the work of teaching in the country schools. The second measure provided for a maximum subsidy of $2,500 for each of ten high or graded schools to be chosen by the state high school board, in which schools the so-called industrial subjects, including agriculture, were to be offered in connection with the regular school work. There were other important features in both measures, but this is sufficient for our purpose. The first proposition was revolutionary and caught the minds of many for no other reason. The second was conservative, in that it added nothing but agriculture to the present high school curriculum and required but little in the way of additional equipment and buildings. It was also cautious, in that only ten schools were to be used as a basis for the experiment, and the appropriation was made for only two years. After a hard fight the second measure carried. In Pennsylvania I may safely say that it was the very embodiment of state inspection by which this was accomplished. Backed by those who know and believe in the soundness of his

judgment, the state inspector kept our people from committing a grave educational blunder. The first measure would have created a parallel system of schools, in which all the intensity of prejudice and misunderstanding now existing between rural and urban communities would have been fostered, and given new impetus, a favorable basis for the further differentiation of social classes, for the tendency toward caste, for the undermining of true democracy. The second measure, now a law, and known as the Putnam Act, after being in force for a year and judged by its first fruits, provides a sound educational policy and promises to be very popular with both city and country. It is commonly believed that the legislature will extend the work to twice the number of schools at the next session.

Summary.—State inspection is thus seen to have had its origin in Minnesota in the state subsidy plan. The two agencies have been shown to be inter-dependent. Leaving many minor matters of advantage unmentioned, I have pointed out the following as the direct outcome of state inspection: It has succeeded in establishing high standards for administration, instruction and equipment. It has built up an unusual number of efficient schools in all of which there is suitable provision for both the preparatory and the local function of the high school. It has been the means of encouraging generous support of high schools throughout the state. It has operated for a liberal attitude of local boards toward a decent remuneration for teachers. It has created and maintained cordial relations between high school and college authorities and opened a well-beaten thoroughfare between our secondary and higher schools. It has saved thousands of dollars for the state in advocating and insisting upon sensible school architecture, at the same time securing the erection of many thoroughly modern and commodious buildings. It has exercised a wholesome influence upon the personnel of the state educational forces. It has dignified the position of superintendent by encouraging a liberal extension of his prerogatives. It has given direction and efficiency to the smallest high school in the state. It has brought into the system real unity without establishing a dead line of uniformity. And finally, while it encourages all that is unquestionably good in the new education, it furnishes the best possible agency for protecting the curriculum of the high school against the purely sensational.

In reply to a question, the speaker said that in Minnesota no gathering like this would be possible. The superintendents control everything.

Question: Has the high school inspector anything to do with the selection of county superintendents?

Answer: No. The county superintendents are chosen by popular election. The condition of the rural schools is lamentable.

Q. How are the city superintendents selected?

A. By the local boards of education who are elected by the people.

Q. Are there many schools not recognized as high schools, which receive state aid?

A. None. Some graded schools do high school work, but receive no state aid.

Q. Do high schools attempt to train teachers?

A. No.

Q. As to non-resident pupils: Do outside pupils board away from home?

A. Yes. It is one of the weaknesses of our system.

Q. Is the head of the high school a superintendent?

A. No; a principal.

Q. What do you call the head of a three-room system?

A. If a graded system without a high school, he is called a principal.

Q. Does not your law cause a gravitation of pupils towards the best high schools?

A. No. In Minnesota the high schools are equal. The most characteristic feature of our small high schools is their excellent work. The classes are smaller, and there are less distractions than in the cities. The qualifications of teachers for all grades of high schools are the same.

Q. How do you hold your pupils?

A. Our enrollment is large. This is due to the character of the pupils, many of whom are of Scandinavian origin. The conditions in this State and Minnesota are not to be compared. Most of the inhabitants of my State are prosperous farmers. In this State mining and other occupations are responsible for different conditions.

Q. What per cent. of the high school boys go back to the farm?

A. There lies the difficulty. We are trying to get them back by introducing the study of agriculture.

TRAINING TEACHERS FOR THE SECONDARY SCHOOLS.

"Practical Results of the Professional Training of Secondary School Teachers in Certain American States," the next subject upon the programme, was discussed by Prof. David Sneddin, of the Teachers' College, Columbia University, New York.

In opening the discussion Prof. Sneddin referred to the great improvement in the general educational qualifications of high school teachers within the last twenty or thiry years. The development of American secondary education is marvellous. Twenty years ago one-third of one per cent. of the population was attending high schools; now one per cent. is to be found there. America has more pupils in schools of this class than any other country in the

world. More college graduates are turning to teaching than ever before. In California only such persons as possess a college diploma and some additional qualifications are permitted to teach in high schools. Our high school teachers are far better educated than formerly as to subject-matter, although perhaps not better professionally trained. It is only in the last decade, and in some states, that attention has been turned to making a high school teacher a professional man as well as a master of his subjects. College professors of pedagogy are becoming numerous. As many American college graduates do teach, it is fair to expect the college to be a professional school as well as a college of liberal arts.

The professor of pedagogy has not yet been recognized as on an equality with the professors in other departments, for the college is not yet willing to admit that it is a professional school. The colleges have included chairs of pedagogy only because they were forced to—even the denominational schools.

Is the present restlessness in secondary educational brought about by this? The cause is probably deeper. Along with increased interest in secondary education has gone a tapping of new levels. In Minnesota to-day the farmers' sons are attending high schools. In New York the laboring Jew looks forward to sending his children to a high school. This was not the case fifty years ago. The high schools are reaching downward. They are in truth becoming the people's college. If we do tap lower levels, and our high schools become democratic rather than exclusive, secondary education must be adapted to these new conditions. Old traditions must give way to the practical demands of the century.

Historically, the high school idea was one of liberal education—the awakening of the mind —and so, not many years ago, we fought against anything utilitarian. Only in the last few years have manual and industrial training been introduced. We may fight against it as we please, the vocational education movement is with us, and to stay.

Not that vocational education is a new idea. It dates back to the primeval forest. The farm, the shop, the ship, the home—all these have given vocational education to numbers of people. But never before have the public schools attempted to perform this function.

Why are the schools now asked to do it? Because the old agencies have broken down, owing to modern economic changes. We will be compelled either to offer such education in the high schools, or another system of schools will be demanded by the people. Massachusetts, New York and New Jersey have developed machinery for this instruction, without which we are likely to become a nation of ignorant laborers. Our problem to-day is to combine vocational proficiency and liberal education.

Colleges and universities have established chairs of pedagogy for instructing secondary school teachers. In California, for six months I taught from one hundred and twenty to one hundred and fifty students, attempting to give them some little notion of the adolescent. We do not know much about the psychology of this wonderful phase of mental development. Departments of education in our universities are as yet trying to find themselves. As yet their work is crude; they are still wandering in the wilderness. The professors are enthusiastic but often not well informed. The present-day tendency is for colleges of education to break off from the universities. In them there will come about a recasting of educational values.

Some of the liberal-arts subjects we formerly taught did not give culture, but were defended on the ground of mental discipline. Our ideas on the subject have been disturbed. A man of national reputation questioned why nine out of ten American girls should study algebra and geometry when they have no interest in these subjects. It is really a question. There may be reasons for making her take these subjects, but we do not know what they are. Does the girl get any valuable training from these subjects under the circumstances? Where could she apply her knowledge after she got it?

We stand committed to the study of foreign languages. And yet no foreign language is mastered by our methods. I believe each child should study one foreign language, but study it a great deal—three or four years. Otherwise we have no product worthy of mention.

So of history. It is supposed that history study will give training for citizenship. It ought to do so—perhaps it does. Are our text-books and our present methods of approach doing this? I believe new methods are needed to arrive at the desired result. These are questions that secondary education will have to answer.

Let us look at the practical results of the training of secondary school teachers. First, there has been developed a spirit of inquiry as to the needs of the community and of the adolescent, in addition to a knowledge of subjects taught. If we get this attitude, good results must follow.

These university departments of pedagogy have developed strongly in some

states and little in others. There are six states in the Union where teaching in the secondary schools is a profession and in which university and college recognize that it is a profession, that special preparation is necessary, and that a teacher can be prepared to teach in a given field. The training institution endeavors to assist a student to focus his efforts.

The average high school teacher will begin in the small high school, and later will reach the large city high school, perhaps as a specialist. The educational departments of the universities require that the high school teacher take essentially professional subjects. The history of education has been a favorite study, in addition to the philosophy of education. We are now trying to get nearer to the actual. History of education does not get near enough to the teacher's life-work. Psychology also did not function in the past; but now it has assumed a practical relation to teaching. The University of Education has been contributing some valuable information along this line, which will result in better insight into the problems of the teacher.

Another group of studies, which lacks a name, relates to school administration—the study of the community for a scale of educational values, so as to get away from the peculiar detachment of the high school from the interests of the community. High school subjects have been taught in a non-functioning manner. If it seems desirable that our boys and girls go back to the farm let us educate them that way. A great deal of our science is non-functioning. The colleges are partly responsible for this, but they would certainly yield to a mass demand on them to alter their entrance requirements. This study of the needs of the community is in its infancy, although some states are achieving results.

Another field, in which the normal schools have always done some work, is laboratory work in the training of teachers. Until recently the universities have done little of this work, but are now beginning to think it important. It is not expected that a few weeks' training will result in much practical efficiency, but that it will enable the students to overcome their first crude difficulties.

In California every high school teacher must do at least a half year of graduate work. Some students take a full year. Every high school teacher in this state is a college graduate and has had this additional training. The state-law demanded and the universities responded. The result is that high school teaching is regarded no longer as a stepping-stone to other professions.

The Teachers College of Columbia University is different from those of other univ rsities in that it is national in its scope; and it offers a good pedagogical and professional education. The University of Pennsylvania does considerable in this line, although I do not know just what.

The auditing committee, through Mr. B. S. Graham, chairman, reported that they had examined the accounts of the treasurer and found them correct.

The Treasurer, Mr. L. J. Ulmer, offered the following report:

Receipts, membership fees		$220.00
Expenditures,		
Printing	$ 24.25	
Postage and Stenographer	26.52	
Prof. Phillips	100.00	
Prof. Sneddin	15.00	
		165.77
Balance		$ 54.23

The following is the report of the Committee on Resolutions:

1. That we express our appreciation of the work of the President, Vice-President, and members of the Executive Committee in arranging for this meeting and preparing the excellent programme to which we have listened.

2. That we have been impressed with the high character of the papers presented and addresses made at this meeting, their practical nature and the usefulness of their suggestions; and desire to express our appreciation of these helpful contributions toward the solution of high school problems.

3. That we heartily thank Supt. Samuel B. Rambo and the Public Buildings Commission for their kindness in granting us the use of the room in the State Capitol in which our meeting has been held.

4. That we earnestly commend the action of the State Superintendent in appointing High School Inspectors and the work of the present inspectors, calling particular attention to the manual issued by the Department incorporating a plan of study for high schools; and that we urge the enlargement of the scope of this department.

5. That it is the sense of this body that the State Normal Schools should be preeminently professional schools; that they should recognize more fully the work of the high schools; and that they or other schools provided for the purpose should perform the function of teachers' colleges.

6. That we believe it should be the ideal of the high school to serve the community, to minister to the material and intellectual needs of its pupils, and so to adapt itself to modern conditions as to render the highest service to all high school students.

7. That in view of the widespread inter-

est in industrial education, we call attention to the usefulness of a State report on the subject.

8. That we respectfully request that arrangements be made whereby all members of the High School Department shall receive reports of all the meetings of the State Educational Association.

Signed: Fred. L. Homer, Jonas E. Wagner, John Webb, committee.

The following were named as the executive committee for the science and mathematics section of the department for the coming year: B. C. Graham, Miss Jane Mathews, G. C. Henschen, Profs. Lee, of Allegheny College, and Anderson, of West Chester Normal School.

President Smith thanked the executive committee and the officers of the Department for their assistance in preparing for the present meeting. He spoke of the good fellowship and unity of spirit existing among the members, and the deep interest evinced in the papers presented, and hoped that the next meeting would be even larger than the present one. He then introduced the new president, Supt. Charles S. Davis, of Steelton.

President Davis said that one of the greatest features of the previous meetings of the Department had been their lack of formality, and so he would make no speech. He urged the members present to aid in making the next meeting large and successful.

The Department, on motion, was then declared adjourned.

MEMBERS IN ATTENDANCE.

Allegheny—John Morrow, W. L. Smith, Dr. George W. Gerwig, Wm. H. Atlia, Jane Mathews, Francis J. Larva, Elizabeth McCreary, Harry M. Ferren, James R. Gleel, George W. Walker, Emma Leitman, Christine Alberti, Effie McMillan, Helen McMillan, M. G. Snyder, Wm. Breitwieser, U. S. Beachley, Hugh L. Porter, C. A. Medlock, Katherine J. Mechling, Irene F. McDermott, Irene F. Donahey, Wm. T. Mackey, Grace E. Marrett, Ella Hazelwood, F. Y. McClure, Eleanor A. Morrow, Mary P. Long, Helen Livingston.

Altoona—G. D. Robb, L. D. Talbot, J. A. Stewart, A. M. Longenecker, Linda Hooper, Minnie Stockton, Mary V. Turner, Marie Lentz, Mary Clarkson, Helen Rickabaugh, Jessie McFarland, Irma Lewis, Jessie F. Davis, Ella G. Burley, G. B. Williams, Jennie Brennicke, Mabel E. Mulock.

Bethlehem—W. C. Sampson, T. S. Stroch.

Camp Hill—E. W. Harvey, W. G. Rice.

Carlisle—T. L. Brooks, J. W. Potter, Mrs. Maude Keat.

Connellsville—C. H. Schwab, C. B. Kistler, Bruce Cobaugh, Magdalena Zufull, Alice Neal.

Easton—W. A. Jones, W. S. Gruver.

Franklin—C. S. Webb, L. E. Cross.

Greensburg—B. G. Graham, J. S. Harkins, H. L. Creamer.

Harrisburg—Nathan C. Schaeffer, C. D. Koch, W. S. Hertzog, R. B. Teitrick, W. S. Steele, A. M. Lindsey, G. W. Hill, F. A. Fishel, Arthur H. Hull, M. A. Grove, Edward G. Rose, Edwin T. Keller, Martin Trace, James A. Smyser, George R. Hull, J. F. Rees, Charles B. Fager, H. E. Todd, Anna M. Saul, Bertha G. Young, Mary C. Orth, M. Ward Fleming, Elizabeth Craighead, Jessie Bowers, Bertram W. Saul, Katherine Zeiders, M. L. Sheetz, Bertha B. Hessing, Mary E. Richardson, George S. Henschen, Lillian S. Blackie, Katherine N. McNiff, Wm. M. Fahnestock, Z. T. Meixell, Lorena G. Evans, J. I. Hamaker, H. M. Weigel, Helen B. Schriber.

Lancaster—B. W. Fisher, E. M. Hartman, H. E. Schlaugenhaupt, John D. Pyott, E. A. Nace.

Lebanon—E. M. Ballabaugh, J. J. Behney, S. F. Pelton.

Lewisburg—H. F. Meyer, William Bender.

Mechanicsburg—C. M. Kast, Helen Kast.

Millersburg—J. F. Adams, Charles A. Miller, Katherine P. Smith, Elizabeth Reber.

Minersville—W. M. Yeingst, Kate S. Richards, Helen G. Jones.

Montrose—John S. Hosterman, Mabel Fawler, Julia Swadener.

Philadelphia—T. W. Bevan, Parke Schock, J. L. Sigmond, M. A. Bryant.

Pittsburg—John T. Morris, D. S. Sweeny, C. G. Clenner, F. L. Harner, George B. Snyder.

Scottdale—Charles B. Francis, G. R. Shultz, Landis Tanger, Myrtle Herbert.

Scranton—A. H. Wells, R. P. Gleason.

Steelton—C. S. Davis, Roscoe Bowman, Mary M. White, L. B. Nye.

Tunkhannock—C. W. Hoover, I. T. Kepperly.

Wiconisco—E. LeRoy Keene, F. E. Shambaugh.

Wilkes-Barre—J. P. Breidinger, S. B. Fares.

Williamsport—P. M. Bullard, L. J. Ulmer, Martha C. Thatcher, Gertrude A. Myers.

Williamstown—F. W. Schoch, D. F. Detter.

Yeagerstown—A. P. Weaver, Margaret McCormick.

Warren H. Rahn, Ambler; Max F. Lehman, Annville; Lawrence W. Cover, Aristis; T. E. Garber, Ashland; J. E. Wagner, Bellefonte; M. A. Richards, South Bethlehem; J. Howard Smith, Berwick; R. P. Wolfersburger, Bismarck; E. S. Latimier, Boston; E. F. Loucks, Braddock; H. B. Davis, California; H. J. Reinhart, Catasauqua; J. E. Hershberger, Conemaugh; Morris Hess, Dry Run; J. B. Geissinger, Dubois; W. Morton Edwards, Duncannon; Sarah M. Gallagher, Ebensburg; M. E. Stein, Elizabethville; Mark Creasy, Hamby; H. B. Anthony, Heckville; C. M. Weigle, High Spire; Charles O. Frank, Huntingdon; N. C. Norris, Little Britain; G. Herman Goetz, Lititz; H. J. Grimm, Mann's Choice; Andrew Thomas Smith, Mansfield; W. E. Bevan, Mauch Chunk; J. D. Eisenhauer; McKeesport; E. D. Lewis, Meadville; S. C. Beitzell, Mechanicsburg; H. B. Garver, Middletown; P. M. Harbold, Millersville; Julius B. Boyer, Milroy; W. W. Eisenhart, Morrisdale Mines; L. B. Earhart, Mount Joy; Mary M. Shull, New Bloomfield; G. A. Dickson, New Castle; Daniel Rutt, New Oxford; H. A. Hempe, New York; W. H. Alspach, Newmanstown; C. E. Cole, Palmerton; H. S. Light, Palmyra; E. C. Lavers, Pen Argyl; D. E. Good, Penbrook; J. Buell Snyder, Perryopolis; H. D. Robbins, Phœnixville; S. H. Zeigler, Reading; George A. Meminger; Renovo; J. Linwood Eisenberg, Royersford; E. P. Heckert, Schuylkill Haven; J. F. Newman, Shippensburg; H. W. Shimer, Siegfried; Joseph S. Knapper, Sunbury; F. W. Wright, Uniontown; W. P. Stewart, Verona; T. B. Gaige, Warren; C. G. Grimin, Windsor; W. C. Graham, Wilkinsburg; E. U. Aumiller, Wrightsville; C. B. Pennypacker, York.

EDITORIAL DEPARTMENT.

THE forty-eighth annual convention of the National Educational Association will be held in Boston, July 2d to July 10th. The delay in securing satisfactory rates from the railroads has deferred the decision of the Executive Committee as to place and time of meeting for 1910. The New England lines offered one and one-quarter first-class fare. The Western lines demanded one and one-half fare. The Grand Trunk Railway, of Canada, offered the rate of one fare for the round trip from Chicago and Milwaukee and points east on their lines—and the committee made prompt decision. The Boston meeting in 1903 was very largely attended. Boston knows how to entertain a great convention, and the school men and women of the country will be there in force next summer. The meeting of the Pennsylvania State Association will be held at Erie, June 29th and 30th and July 1st, so that those wishing to go to Boston may be present at both conventions.

The annual meeting of the City and Borough Superintendents of Pennsylvania will be held February 8th and 9th; that of the County Superintendents February 9th and 10th; and of the State Association of School Directors February 10th and 11th. All these meetings will convene in Harrisburg, and any one desiring to do so can be present at all of them during a four days' stay in that city.

The full proceedings of the High School Department of the State Association are found in the present issue of The Journal. The paper by Professor Phillips, of Minnesota, telling how the High School problem has been worked out in that State, is unusually suggestive and of much practical value. The reports of the three meetings above named to be held in Harrisburg during the second week in February will appear in successive issues of *The School Journal,* and will be published later in the special report of proceedings to be issued by the Pennsylvania State Association.

The January issue of *The Journal* was thrown back by the pressure of work at the printing office. But though late it seems a welcome number. One man calls us to the phone to say how much he has enjoyed reading it through from cover to cover. By the next mail came a pleasant letter from Dr. Edward Brooks, who says: I have just finished reading the January number of *The School Journal,* and my heart is warm from its perusal. It is a great number—full of information and inspiration. The selections contain many a golden truth set in the silvery caskets of artistic speech. Many of them will pay for a second reading, and there are maxims in some of them that are worth committing to memory, 'Personality is a dynamic thing,' as Felix Arnold says, that cannot be too carefully considered by the teacher. The illustration of the attention of boys being secured by the statement that 'some bright boy in this audience may become a great base-ball pitcher or the world's champion baseman,' calls attention to the ambition of American youth not always suggestive of a great future.

"The address of Dr. Nichols on the decline of enthusiasm for study is encouraging to those of us who have deprecated the influence of athletics on the taste for scholastic standing in the modern college. 'The Church's Reply to the Colleges' is an interesting and timely article and full of encouragement for the spiritual element in education. The spelling contest of the boys and girls of Bradford county, with its big words, would, I fear, have sent many of us older pupils to our seats. 'How Duke Saved his Friend' opens the door of reflection on the question of the intelligence and affection of brute animals. The thoughtful article on 'The Mystery of Sleep' awakens serious reflections and reminds one of the celebrated soliloquy:

"To sleep—perchance to dream—ay, there's the rub,
For in that sleep of death what dreams may come,
When we have shuffled off this mortal coil,
Must give us pause."

"The suggestive article, 'My Best Teacher,' should lead the young teacher to higher ideals of his work in the school room. The money saved by our venerable young friend, W. W. Woodruff, always young in spirit, no matter what the almanac or the family Bible may say, should teach an important lesson to the young men teachers who may read it. Perhaps the saving has not been in money merely, but in health and life.

"The editorial on 'The Common School Memorial' gives an appreciative resumé of the valuable educational services of Pennsylvania's most distinguished educator, Thomas H. Burrowes, the father of the Normal School system of the state, and in a most practical way of the Common School System also. In the 'Veteran of Veterans' we are reminded again of the unique and

efficient career of Dr. W. W. Cottingham who in a very specific sense has found that 'at evening time it shall be light'; and for whose character and educational services we 'younger men' take off our hats in respect and admiration. I yield to my impulse to send you these hastily written words as I rise from the reading of this excellent number of *The School Journal.*"

FRANKLIN AND MARSHALL.

NOTABLE EVENT IN HISTORY OF THE COLLEGE.

NOT before in the history of Lancaster has there been brought together, within its borders, such an assemblage of leaders in the educational life of the East, as on Friday afternoon, January 7th, when Rev. Dr. Henry Harbaugh Apple was formally installed as president of Franklin and Marshall college, in Fulton opera house. The ceremonies were impressive and interesting and notable for the presence of distinguished men in the religious and educational world and in the state government.

The opening prayer was by Rev. Dr. J. Spangler Kieffer, of Hagerstown, Md., who is president of the General Synod of the Reformed church. Governor Edwin S. Stuart made a speech and Woodrow Wilson, president of Princeton University, and one of the greatest educators in the country, did the same. In addition to these men brief addresses were made by State Supt. Schaeffer, Mayor McCaskey, and the retiring president, Dr. John S. Stahr. An able inaugural address was delivered by President Apple, after which he conferred honorary degrees on a number of the educators present. There were delegates from forty-seven educational institutions and the imposing academic procession was from the First Reformed church to the opera house.

In formally inducting the new President into office and bestowing upon him the keys, seal and charter as symbols of custodianship, Mr. George F. Baer, President of the Board of Trustees, who is also the President of the Reading Railroad Company, spoke as follows:

A century and a quarter ago (the 15th of March, 1787), the Commonwealth of Pennsylvania passed "An Act to incorporate and endow the German College and Charity School." The justification for the incorporation is stated in the preamble of the Act to be that "the citizens of this State of German birth or extraction have eminently contributed by their industry and economy and public virtues to raise the State to its present happiness and prosperity." The corporate name given was "Franklin College" in honor of Benjamin Franklin, who was then Governor of the State. This is the language of the Act:

"From a profound respect for the talents, virtues and services to mankind in general, but more especially to this country of his excellency, Benjamin Franklin, Esquire, President of the Supreme Executive Council, the said college shall be and hereby is denominated 'Franklin College.'"

A half-century later (the 31st day of March, 1836) the Commonwealth of Pennsylvania incorporated Marshall College, "for the education of youth in the learned languages, the arts, sciences and useful literature." This is the explanation of the name given in the Act: "In testimony of respect for the exalted character, great worth and high mental attainments of the late John Marshall, Chief Justice of the United States, the said college shall be called 'Marshall College at Mercersburg.'"

On the 19th of April, 1850, the Legislature passed "an act to unite and consolidate Marshall College with Franklin College, under the name of Franklin and Marshall College, to be located in the city of Lancaster."

This is the Genesis of Franklin and Marshall College. Honorably born, well named, it has so far had a successful life. It is an exalted distinction for a literary institution to bear the names of Franklin and Marshall—two great Americans, whose fame will be as enduring as the everlasting hills.

The city of Lancaster was not only the original choice for the location of Franklin College; but in the consolidation act it was paid this compliment: "A place so central, healthy, moral and enlightened, so easy of access from most quarters, so able to assist in advancing the great objects in view and so liberal in offers of substantial aid."

The compliment is a deserved one. Nature has been prodigal of her gifts in this region. Lancaster county has not been inaptly called "the garden spot of Pennsylvania." Here "things rank and luxurious do grow," and "sweet fields stand dressed in living green." In your natural surroundings everything tends to elevate. It is a healthy, bright, hopeful locality, where study to the studious must ever be a delight. Your population represents the best type of citizenship. Your prosperity tends to alleviate the ills of life and to build up an honest, independent character. So far you have escaped that form of prosperity which leads to idleness, vulgar display and riotous living—the curse of wealth. The name and the locality so well chosen—the object to be obtained is

not less aptly described. Here it is:

"The preservation of the principles of the Christian religion and our Republican form of government in their purity depends under God in a great measure on the establishment and support of suitable places of education for the purpose of training up a succession of youth who by being enabled fully to understand the grounds of both may be led the more zealously to practice the one and the more strenuously to defend the other."

The principles—mark you, not theories—of educational, ethical and political development set forth in our charters this college has sought to maintain and has steadfastly refused to lend "itching ears to strange doctrines." We believe in historical development, growth, evolution, but we respect and honor the past. In any real sense there is no "dead past." The life of the present flows through stems and branches, whose still living roots were planted in the distant past when civilization began; in that misty dawn of history of which we have no clear record; the remote past, when "the morning stars sang together and the Sons of God shouted for joy."

In our day there is a marked tendency towards destructive criticism. Intellectual vanity and irreverence seek to create a new heaven and a new earth with conceded incapacity to create a new man or to modify the constitution of the man God created. The past to them is a veritable pandemonium. The truth is not the truth as it has been revealed to us, or as it has been developed through the sufferings, tribulations and mighty efforts of the ages and accepted by common consent; but it is something which they themselves have evolved; and, assuming the dolorous visage of martyrs, they tell us they must go where the truth leads—that is, where their conception of the truth leads. This kind of thinking invades all modern conditions. We find it in politics, where the voice of vociferous, megacephalous politicians is arrogantly called the voice of the people. We find it in theology, where everything possible is being done to destroy that faith of the people which in trials and sufferings has brought comfort and peace to so many souls; and that, too, without substituting for it even an hypothesis to foreshadow like blessings. It is, indeed, marvelous that under these adverse circumstances the morals and character generally of the people have been preserved. It is against such teaching that this college stands steadfast and unmovable.

We are assembled to-day to inaugurate a new President. After long years of service Dr. Stahr found that the burden of administration increased whilst his strength decreased with age. It was with great reluctance, and after a year's delay, that the Board of Trustees accepted his resignation as President—retaining his valuable service and experience as a professor.

Henry Harbaugh Apple, you have, without a dissenting voice, been elected President of Franklin and Marshall College. As the President of the Board of Trustees, and in accordance with their direction, I do now declare that you are fully vested with all the powers, rights, privileges and responsibilities of the office. I need not enlarge on the duties assigned to you. A son of the college, in the vigor of youth, and a son of one of its distinguished Presidents, you know better than words of mine can tell the obligations and the responsibilities you have assumed. I deliver into your hands as a token of authority the highest symbol of power—the keys. May the good Father give you wisdom and strength to "quit you well" in the vocation "whereunto you are called."

J. W. Wetzel, Esq., of Carlisle, who was Chairman of the Inaugural Committee of the Board of Trustees, announced the programme and his introduction of Dr. Woodrow Wilson, the distinguished head of Princeton University, was the signal for an ovation. Dr. Wilson is always interesting, and importance naturally attaches to utterances from any one of his wide experience, ripe scholarship, rare culture, and creative thought. He said some things concerning modern college life and tendencies from which educators would shrink, but to the truth of which they cannot shut their eyes.

It was a pleasure, he said, to convey greetings upon such an occasion and to be in close association with those who are engaged in a common enterprise. It was a pleasure for representatives of other institutions to come from their respective centers of hope and activity to be the purveyors of congratulations.

Turning to Dr. Apple, the speaker said: "If I were speaking to you in private I would also extend my sympathy and condolences." College presidents, he continued, have a peculiar responsibility. They are expected to go everywhere and talk about everything. They often don't understand what they are talking about, but tradition gives them a certain oratorical freedom that they would not otherwise possess. It is a pleasant circumstance, however, that they are called upon to address the people. It is not so much a compliment to the college men, but it is because they stand for education, and it is assumed they will give unprejudiced advice. It is an honorable feature of our institutions that they

have representatives who think and speak on public questions just as they believe as honest men.

The question arises as to what true academic training is and what the college should give. The country has grown very audibly critical of the existing programmes. It has perceived there is something lacking in what the colleges are doing, and the discovery has been a good thing for the college. The speaker felt that the trouble was not so much with the programmes as with their performance and with the students themselves. College life has grown so absorbing and interesting that college work has fallen into the background. Sports, social functions and amusements are so conspicuous that our atmosphere is surcharged with things foreign to our work. The tables have been turned. We are continually resorted to, but we no longer occupy the front of the stage. The college is a section of the world where young men are professing to do things, and are truly doing nothing. Its business is make-believe. It remains for the college authorities to recapture the strategic positions if they are to be the real purveyors of knowledge. What will happen if the college loses its democratic feeling? The Roman Catholic Church saved the Middle Ages from dry rot and the spirit of democracy saved the church. No priest was so humble that he might not rise to the papacy. The renewal in every age has come from the roots and not from the branches. The flower does not supply the plant with its power, and when the college ceases to be the channel for this renewal it will cease to serve its purpose.

We do not under-estimate the great advantages of past generations of learning and culture, but the college is not so much for the men who come from homes of culture as for the other class. We are engaged in a sort of minor statesmanship. It has nothing to do with parties, but everything with the life of the nation, and the real object of the college should be to give her student such a training as will fit him to serve America as she should be served by disinterested men. Knowledge is not education. There are some men so full of knowledge, their minds are so crowded that they cannot see what they contain. Give me the man who has forgotten the knowledge, but has retained every habit and every impulse that its acquisition gave him, and I will prefer him to the man whose mind is stored with great chunks of information. Education consists in establishing in the mind certain habits of power. If we regard ourselves merely as purveyors of knowledge we have but the smallest conception of our functions. We are bent upon the undertaking of releasing the faculties of men. That man is the best equipped who can change the process of his occupation. That is the educational advantage. This is not a private, but a public, business. Let the people know what the actual facts are in college life, and then ask for their co-operation in removing the obstacles. Let us not gain the whole world of students and lose our own souls.

The popularity of Governor Stuart in Lancaster was manifested by the cordial and prolonged applause that greeted his introduction. He said, I esteem it an honor as well as a privilege to attend the inauguration of a President in this long-established seat of learning. If tradition be true, and it seems to be based on fact, Benjamin Franklin, one of America's foremost citizens, attended the laying of the corner-stone of the first building occupied by Franklin College. The records show that Muhlenberg, the famous botanist, and James Ross, the author of the Latin grammar, were among its early professors.

After the union of Franklin with Marshall College, James Buchanan was for many years President of the Board of Trustees. Among the distinguished professors of Marshall College I find the names of Rauch, the philosopher; Nevin, the theologian; and Schaff, a scholarly writer of church history. On its roll of students occur the names of Harbaugh, the poet; Hartranft, the distinguished soldier and Governor; John Cessna, for many years one of the leaders in Congress; and Dr. Steiner, who organized the Enoch Pratt Library, at Baltimore. I forbear to speak of the distinguished sons of Franklin and Marshall who are still in our midst. Suffice it to say that they have graced the bench and the halls of legislation, achieved fame on the field of battle, in the world of commerce, finance and transportation, in literature, science and art, in the professor's chair, and in the domain of public education.

"Lux et Lex" is the motto of the College—"Light and Law." What this Nation needs at all times is the light of truth and the observance of law. Learning, without the light of natural and revealed religion, is an empty possession. Liberty, without law, becomes mere license. When the observance of law is guided by the light of intelligence, when doing is illumined by knowledge, when light and law make themselves known and felt, not merely within the walls of your College, but throughout the Commonwealth and the Nation, then, and only then, can the people be righteous as well as prosperous.

In closing, permit me to congratulate you upon the choice of your President; the new President, on the high honor which has come to him, and the students upon the training which they will get under the auspices of Franklin and Marshall College.

Dr. John S. Stahr, the retiring president, forty-two years a member of the faculty and for the past twenty years president of the college, spoke with feeling the congratulations of the alumni and students to the new president and their high hopes for the future of Franklin and Marshall.

Let us make here a three-fold profession of faith. I have faith, first of all, in the college as an abiding factor in our American scheme of education, and, pre-eminently, in the Christian college, or the college fostered by a religious denomination. Whatever may be said of other educational institutions, and however insistent may be the claims of high school and university, I believe that all sound education must include three things which in their relation and wholeness the college can furnish better than they can be furnished anywhere else. These are first the acquisition of knowledge in the different departments of study, and the gaining of culture. To be a man is to be in touch with the life of the present day and to feel thoroughly at home, through the study of the sciences, in the environment in which life must necessarily develop; but it is also to be in touch with the life of humanity in the larger aspects of history, art and literature. The pure, free atmosphere of the college affords an opportunity for the cultivation of these two aspects of education such as cannot be found in the smoke and dust of industrial training, or in the narrow forms of specialization. Again, there must be the training and discipline of the powers of the mind in their harmonious development, so that the man, as a whole, is fitted for action in any position in which he may be placed so far as regards the summoning and using of all the powers and resources at his command. And finally what is of still greater importance there is needed the forming of character through the personal influence of teachers and the moulding power of a Christian environment, so that the transition from a stage of tutelage into that of freedom and spontaneous activity in the form of right living may be made with safety and success. As long as there is a demand for this kind of education so long the college will be needed in our educational system.

In the second place, I have faith in Franklin and Marshall college. I believe that she stands pre-eminently for the kind of training needed by young men of the present generation. Modern in her sympathies, in touch with the demands of the scientific development of the present day, prepared by her teaching force and equipment to do effective work in every department of study, and yet holding fast to her precious heritage of liberal culture, philosophical discipline, and Christian training she cherishes the highest ideals and offers the most effective training to the young men who come to her halls before they step out into the busy arena of life.

In the third place, I have faith in you, President Apple, I believe that you are animated by the spirit which has had its historical development in Franklin and Marshall college, and that as you study the educational problems of the day, you will keep in line with al that is best in modern methods and present day needs, at the same time that you will remain true and steadfastly loyal to the genius of our work, that you will cherish the precious legacy which has come down to you from those who have preceded you. In the last twenty years the college has made rapid, if conservative, progress. The faculty has been enlarged, the course of study has been widened and enriched, the methods of instruction have been modernized, the equipment has been made equal to the best, the endowment has been increased, the college has grown in the confidence and esteem of the community and good seed has been sown which will bear precious fruit in the future. You are called, therefore, to lead not a forlorn hope, but a successful enterprise, and in the responsible work committed to your hands you will have the hearty sympathy and loyal support of all the friends of the college. Trusting that you will have the same wise guidance and efficient support of the board of trustees, and the same loyal devotion and co-operation of the faculty, the same respect and confidence of the alumni and the student body that it was my privilege to enjoy, all these and more, I bid you God speed, and I look forward with the fondest hopes of a successful administration and an era of prosperity and progress that will surpass every previous period in the history of the college.

Dr. Nathan C. Schaeffer conveyed to Dr. Apple the greetings of the great school system of the State, and his remarks were directed to the relation existing between the public school and the college.

Mayor McCaskey extended the congratulations of the municipality, and indulged in reminiscences of the early days of Franklin and Marshall, than which for the past fifty years there has been in this community no more potent factor for high culture, noble thought and better things.